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I.

PRACTICABLE CORRELATIONS OF STUDIES[1]

Before stating what correlations of studies seem advisable and possible at present, I must make clear a few principles essential to any wise correlation, whose recognition will avoid many of the blunders that have placed correlation in a false light.

Correlation has been in as great danger from its friends as from its enemies. Premature attempts have been made to crystallize it into systems, to bind it down to mechanical forms often by those who failed to grasp its spirit, resulting in strange and kaleidoscopic courses of study that have given excuse to its enemies for the claim that correlation means basing school curricula upon artificial and fanciful relations, and disregarding essential unities within lines of studies. But these things are not correlation any more than bigotry is religion, or formalism Christianity. I would define correlation in courses of study as a recognition of the natural relations existing among the various departments of human activity, and such an arrangement of these departments for presentation to the child that all his knowledge shall stand clearly in his mind in its true relations to the whole and to each of the parts. If the child is to go forth from school, fitted for a life made up of relations, it is necessary that the knowledge he receives and the activities in which he engages

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in the course of his preparation shall all have reference to these relations; hence, courses of study which determine both the knowledge and the activities must be so arranged that isolated knowledge and reasonless activities shall be impossible.

What are the various branches of study? What determines whether a study falls within one branch or another? Merely the point of view. The same object may be studied as belonging to several of the different branches. Dr. Charles McMurry has clearly pointed this out in the December (1895) number of the *Public School Journal*, using the oak tree as an example, which may be studied with equal propriety from the standpoint of the botanist, of the artist, of the lumberman, of the social scientist, of the meteorologist, of the poet. For the most part the classifications are arbitrary, were made when the world of knowledge was vastly smaller than it is to-day, and do not even fairly represent existing conditions; and the child who studies them as separate and distinct branches of knowledge, which will fit him for separate and distinct activities in life, does not get a truthful impression. Dr. Harris tells us that there are five co-ordinate branches of human learning, and that it is important that all of these receive attention in a scheme of education. But it is more important that the essential unity of these co-ordinate branches be also recognized, for these five departments are not to be conceived of as parallel lines, extending into infinity and nowhere touching; they are rather the radii of a sphere, united at the center in a vital union from which comes all the worth of each, for each is enriched with the richness of all the others.

True correlation is neither artificial nor mechanical; it cannot be fully shown even in the best courses of study. Primarily, it must exist as subjective in the mind of the teacher. If he grasp the essential unities of things, it may, to a degree, be made objective and apparent in the course of study, and still more so in the teacher's interpretation of it, but it is more important that the teacher be in himself a correlation of knowledge, than that a course of study exhibit it.

If teaching is a vital relation between teacher and pupil, and the end of teaching is the development of the pupil,—as Professor Tompkins puts it, "The union between the pupil's real and ideal self,"—then the essential thing, so far as knowledge is concerned, is that it shall be correlated in, and with, the pupil's mind. If these things are true, as I believe them to be, the first thing that we must do is to train the teachers. They must be filled with a sense of the importance of correlation as a principle. It must become subjective in them. This means a better education for the teachers, that they may have a wider grasp of the truth. But it is not necessary to wait until we have a more highly educated body of teachers in the country before we begin. The very act of grasping and administering a broad and wisely correlated course of study is in itself a liberal education.

The old courses of study were deadening to teachers as well as to pupils; the new are inspiring to both. Teachers feel that they themselves are growing while leading their pupils to the shrine of truth. The improvement of the teachers, both in spirit and in power, has been one of the most marked effects of improvement in the courses of study. No one can devote his energies first to comprehending and then to imparting the broad ideas implied in a truly correlated course of study without growing in breadth and power from the effort.

Next we must consider the preparation of a course of study, which shall furnish material for growth and stimulus to effort to both teacher and pupil, and here we come to the meat of the problem, for even the most thorough students of correlation do not all agree as to what it means and as to how it is to be made effective in schools. We are as yet seeking for truth and need to be very honest with ourselves, and to keep all our windows open. But a few things seem to me reasonably clear.

The first thing that one preparing a course of study must take into account is the distinction between form and content. This seems to me vital. A correlated course of study must include both co-ordination and subordination; a co-ordination of the great fundamental branches of human thought—the five

of Dr. Harris, if you will—and the subordination of those branches which are in nature subordinate. The former constitute the content, the latter, the form of a course of study; or, to put it differently, I use the term, content, as including those branches of study which possess an intrinsic and fundamental value; they are the means by which the essential are realized. In a general way, the former consists in a consideration of man and the spiritual world and of the world of nature, and the latter, of the various arts by which man comes to a possession of nature and himself. These distinctions are not arbitrary or exact, and here it is necessary to speak of a criticism made on correlation by those who do not comprehend it. A distinction between form and content does not imply that they are to be treated as separate and unrelated entities, —that would not be correlation, but disintegration. This distinction means that they are to be so related in the teacher's mind, and are to be so presented to the child, that the relations will become subjective in him. He learns to read, not that he may learn to read, but that he may be introduced to the world of literature; hence he should learn to read by reading something worth while. He learns to write, not that he may learn to write, but that he may be able to communicate the best that is in him for the benefit of others. I do not mean by this that there should not be direct and thorough drill upon the arts themselves, but that this drill should be given after and not before the child has come to realize his need of a medium of expression. The higher end ennobles the means and makes it worth acquiring.

There are three general divisions of the work of education. The first is creating in the pupil a high purpose; the second is acquainting him with conditions, needs, and possibilities; and the third is furnishing him with the means for the accomplishment of his purpose. But these three are parts of one whole. The second, acquainting the child with conditions, needs, and possibilities—in other words, knowledge—stands as a middle term, creating ideals on the one hand, and suggesting activity, stimulating effort to acquire the means on the other. Hence,

it forms the natural content of his education. The great reason for placing emphasis upon the distinction between form and content is the necessity for the comprehension of this distinction, if the adult is to have a true grasp of values in life. One principal obstacle to the progress of civilization is the failure of men to comprehend the difference between means and ends. The average man devotes his energies to the acquiring of that which is, in itself, only a means to a higher end. The eager struggle for money, for power, for social position, which renders so ignoble the life work of most of us, is due to the fact that we look upon these things as ends in themselves, and not as means to higher ends. But what can we expect of men whose early efforts have all been devoted to the acquirement of means as if they were ends?

If the child is taught to read as if the ability to read were the end of his effort; to write, as if fine writing were the best thing that he could do, what reason have we for expecting that the man will look upon money, and power, and social position, as means for helping his brother man. "Life is more than meat, and the body, than raiment." Art for Art's sake is thoroughly detestable. As well might we say, food for food's sake or the body for the body's sake. No great work of art, whether in painting, music, sculpture, or literature, was ever great merely because of the artistic skill displayed; rather has its greatness consisted in the noble thought whose expression the artistic skill made possible. This does not mean that skill is not necessary, but rather that it must be kept subordinate to the theme; this alone makes it worth while. Tennyson's musical verses did not make *In Memoriam*, but they made it possible. For the sake of writing *In Memoriam*, it was worth while that the poet should master all the arts of poesy. Nobility of purpose, exaltation of theme, whether in adults or in children, furnish the only true stimulants for laboriously acquiring the arts necessary for adequate expression. This, applied to education, dues not draw a hard and fast line between form studies and content studies, but relates them properly, so that the child always has before him the worthy aim, as an inducement

to the acquiring of the adequate means. While this subordinates reading, writing, spelling, and language drill, it does not degrade them, it rather exalts them, since thus alone do they find their true place, and are ennobled by a noble purpose.

Let me here say that I do not believe, nor do I mean to imply, that these subordinate branches are to be taught wholly incidentally. It is true that power to read, write, spell, draw, and in the mechanical sense, to use language, is acquired mainly by practice in the use of these arts. It is an unconscious product, just as walking is; still, there is a technic for each of them, knowledge of which adds greatly to the power to use them effectively, and this technic must be taught specifically and thoroughly, but at the proper time and in the proper way—that is, as to time, when the child feels the need of it, that he may better attain one of the higher ends of life.

As to way, it must be so taught as to satisfy this need, so that the child may feel that he is gaining new power to aid him in the attainment of a desired end. The amount of attention to be given to this study of technic varies with the age of the child, as indicated by his school grade.

In the primary grades comparatively little attention need to be given to it. I am compelled to disagree with the opinion inferred by some from the Report of the Committee of Fifteen, that the first three years of school life should be devoted almost exclusively to the acquisition of this technic, with only incidental and casual attention to the content of the course of study. It is true that in these three years the child should acquire a fair possession of this technic; but at this age, when he is little able to grasp philosophical principles and to undertake effort with a view to remote results, it is all the more necessary to appeal to his interest. The young child will best acquire the necessary arts incidentally. The ends for which he works must be evident. Place before him a content to him valuable and interesting and immediately obtainable, and he seeks it through the medium of

the necessary arts. The adult, the young man in college, may study mathematics for the sake of training his mind; the child, not so; the end that he seeks is concrete.

In the first years, then, the course of study should have for the child the richest content which he is capable of grasping. Thus will he best gain possession of the various necessary arts, and what is still more important, his mind will receive a better training and will be filled with richer thoughts, and he will emerge from these years of school with a broader horizon and a more eager desire to continue his education. Hence, in those earlier years, especial attention should be given to the study of nature and of literature—the lines of study that are at any age most broadening. As the child advances from grade to grade, more attention may be given to technic, as he becomes able to see the relations between form and content; that is, to understand the reasons why certain forms of expression are better than others.

I have dwelt thus upon the relation of form and content because I deem it the first and most important correlating principle. It remains to consider briefly co-ordination, or the relations of the co-ordinate branches of human learning in the course of study, whether they be five or fifteen. As I have said, these must all be taken into account, but not as unrelated. Here even the best of our old courses of study broke down. They attempted the education of the faculties, and ignored the unity of the human soul. They recognized variety, but not variety in unity.

In the first place, a broad course of study should be so arranged that naturally related parts of the different co-ordinated branches may be taught at the same time. I say, naturally related; I do not refer to artificial or mechanical relations, but to spiritual. Our old courses of study are full of absurd instances of variety without unity. It is no uncommon thing for a class to be studying at the same time the geography of Africa, the history of England, the plant life of Minnesota, while having for their reading lesson the

story of Peter the Great, the subjects having no relation either artificial or natural.

On the other hand, there are new courses of study which are as absurd. They show "correlation run mad," as I have heard it described. I remember hearing of a day's lesson in a certain over-correlated city. The subject was the crow. The children studied the crow, read about him, drew him, wrote about him, counted him, added, subtracted, multiplied, and divided him, bought and sold him, and for aught I know, carried him out on a crow-bar. Here was no fundamental or vital relation. The co-ordinating principle was trivial and unsound, and doubtless several good lessons in history, reading, and arithmetic were spoiled for the sake of the crow.

I have said that naturally related principles of the various co-ordinated branches should be taught at the same time, but I do not mean that the relations are necessarily time relations. These would frequently be artificial, and not even suggest the spiritual unity.

I will attempt to make my thought concrete by an illustration taken from the schools of another city. A Seventh Grade class regularly study the history of the United States, the geography of North America, the writings of certain American authors, and local geology. These studies may be so timed as to suggest inevitably fundamental and vital relations. To begin with, the class are taken out for a field lesson upon the banks of the Mississippi. Here they see the fundamental rock strata, observe the great valley worn out by the waters, get specimens of rock containing the earliest fossils, see the broad plains stretching out into the boundless prairies, whose soil was deposited by the glaciers. They learn how the great Mississippi valley, with its adjacent plains, was formed. That is, they get a concrete knowledge of the physical geography of this part of the world. This leads both to the history and political geography. They learn not only the effect of early explorations on this river and on the great lakes, but they see why these explorations were made. They not only find out how these great plains were produced, but see in

them the reasons for the migrations of so many people and for the vast civilization growing up in the West. The struggles of the early settlers are emphasized by the poem *Evangeline* and the travels of Irving and others, so that a complete picture of the growth of Western civilization, with an understanding of its cause, is left upon the minds of the children. A taste has been created for investigation and a love for literature, while also all this rich content has served as a basis for numberless lessons in reading, writing, and language.

I have purposely omitted mentioning mathematics in this connection, because, in my judgment, this branch is not so readily correlated with others. Certain problems of distance and travel and longitude are suggested by the other topics, but such work, while valuable, would be merely incidental, and could not serve as sufficient material for mathematical study, though even here other correlations are possible between elementary geometry and manual training.

I offer this illustration hesitatingly, for fear that some may say that it is open to the criticism of emphasizing artificial relations. If any so conceives it, it is misunderstood. The relations that I would emphasize are mostly those of cause and effect, though not altogether so. The aim is to produce unity of idea in the minds of children. Each child should have a single vivid picture including objects from all these co-ordinate branches, which would be worth infinitely more than any number of isolated facts, even though they included all of history and all of geography.

Now, as to the correlating principle for the co-ordinate branches, it must be evident that I do not believe in the concentration of the course of study about any one branch. No one branch of human learning is clearly enough defined, or essential enough in itself, to be the center of a course of study for the child. No one is so much more intimately related to the child than all the others that it can determine for them their arrangement and the selection of topics from them. The only centralizing relation in the education of the child, in reference to his destiny, and hence the first principle of

co-ordination as to breadth, is that indicated in the Committee of Fifteen's Report, namely, the relation of the child to his material and spiritual environment.

Pyschology, not history, not science, determines also the longitudinal correlation of the course of study. By psychology I do not mean the old psychology, which is merely deductive logic applied to certain assumed mental phenomena, but the actual study of the child.

There are many questions concerning correlation about which there is still uncertainty, but as to what we can do in the immediate future I feel reasonably sure upon these points:

1. That the only correlation to be considered consists of the recognition of the natural and spiritual relations already existing in the world.

2. That these relations exist, if at all, in the human mind, and hence must become first subjective in the teacher, then, in so far as possible, objective in the course of study, then again subjective in the child.

3. That the relations to be considered in the course of study must include both subordination and co-ordination; a subordination of form to content, and a co-ordination of the essential departments of thought.

4. That the only center for a correlated course of study is the child. The child must be our first study; and when all the branches of human learning with which he can be brought into touch, all the activities to which he may be stimulated, are properly correlated with the demands of his nature, we will find that they are correlated with one another, and the miracle will have been wrought.

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II

THE NECESSITY FOR FIVE CO-ORDINATE GROUPS OF STUDIES IN THE SCHOOLS[1]

In the Report of the Committee of Fifteen it was partly assumed that the studies of the school fall naturally into five co-ordinate groups, thus permitting a choice within each group as to the arrangement of its several topics, some finding a place early in the curriculum and others later. These five co-ordinate groups were first, mathematics and physics; second, biology, including chiefly the plant and the animal; third, literature and art, including chiefly the study of literary works of art; fourth, grammar and the technical and scientific study of language, leading to such branches as logic and psychology; fifth, history and the study of sociological, political, and social institutions. Each one of these groups, it was assumed, should be represented in the curriculum at all times by some topic suited to the age and previous training of the pupil. This would be demanded by the two kinds of correlation defined in that Report as (1) "symmetrical whole of studies in the world of human learning," and (2) "the psychological symmetry—or the whole mind."

The first stage of school education is education for culture, and education for the purpose of gaining command of the conventionalities of intelligence. These conventionalities are such arts as reading and writing and the use of figures, technicalities of maps, dictionaries, the art of drawing, and all of those semi-mechanical facilities which enable the child to get access to the intellectual conquests of the race. Later on in the school course, when the pupil passes out of his elementary studies, which partake more of the nature of practice than of

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theory, he comes in the secondary school and the college to the study of science and the technic necessary for its preservation and communication. All these things belong to the first stage of school instruction whose aim is culture. On the other hand, post-graduate work and the work of professional schools have not the aim of culture so much as the aim of fitting the person for a special vocation. In the post-graduate work of universities the demand is for original investigation in special fields. In the professional school the student masters the elements of a particular practice, learning its theory and its art.

It is in the first stage, the schools for culture, that these five co-ordinate branches should be represented in a symmetrical manner. It is not to be thought that a course of university study or that of a professional school should be symmetrical. But specializing should follow a course of study for culture in which the symmetrical whole of human learning and the symmetrical whole of the soul should be considered. From the primary school, therefore, on through the academic course of the college, there should be symmetry and five co-ordinate groups of studies represented at each part of the course—at least in each year, although perhaps not throughout each part of the year.

I said that the Committee of Fifteen partly assumed all this in regard to the five co-ordinate groups. I meant that the Committee of Fifteen had not only assumed it, but to some extent argued the question, for in the detailed consideration of literature, arithmetic, geography, grammar, and history, much pains was taken to show the scope and significance of these studies. Their differences, both objective and subjective, were pointed out. It was shown that their study calls into activity different methods of observation and different trains of thought—different categories of the mind, so to speak. It was shown objectively that these branches cover different portions of the map of human learning, lying in some places contiguous to one another, and sometimes widely separated. In the light of this explanation it will be seen that the Committee

of Fifteen intended their Report to convince the careful reader that no one of these groups could be taken as a substitute for any other, and that no one of these groups could be spared from a symmetrical whole without distorting the pupil's view of the world. If this assumption of the Committee had been fully understood, and if the purpose of the Report had been manifest upon the first reading, no one would have found the Report lacking in a full treatment of the question of the concentration of studies, and no one would have been disappointed. For it would have needed no additional argument to arrive at the conclusion that if there are five co-ordinate groups neither one of which can be a substitute for the other, and each one of which is essential to the child's symmetrical view of his world, a concentration which subordinated one or more of these groups to another would do violence to the child's culture. It became painfully evident, however, in the course of the discussion at Cleveland and subsequently, that the assumption of the Committee, as well as the main line of exposition in their Report, had been entirely missed by many of the ablest advocates of concentration in studies.

For these reasons I have gladly availed myself of the invitation of the President of the Department of Superintendence to present on this occasion in a new form the arguments made in that Report and some statement of the reasons for what is assumed without argument in that Report.

I Commencing with the outlook of the child upon the world of nature, it has been found that arithmetic or mathematical study furnishes the first scientific key to the existence of bodies and their various motions. Mathematics in its pure form as arithmetic, algebra, geometry, and the application of the analytical method, as well as mathematics applied to matter and force, or statics and dynamics, furnishes us the peculiar study that gives to us, whether as children or as men, the command of nature in this its quantitative aspect. Mathematics furnishes the instrument, the tool of thought which gives us power in this realm. But useful, nay, essential, as this mathematical or quantitative study is for this first aspect

of nature, it is limited to it, and should not be applied to the next phase of nature, which is that of organic life. For we must not study in the growth of the plant simply the mechanical action of forces, but we must subordinate everything quantitative and mathematical to the principle of life, or movement according to internal purpose or design. The principle of life or biology is no substitute, on the other hand, for the mathematical or quantitative study. The forces, heat, light, electricity, magnetism, galvanism, gravitation, inorganic matter—all these things are best studied from the mathematical point of view. The superstitious savage, however, imposes upon the inorganic world the principle of biology. He sees the personal effort of spirits in winds and storms, in fire and flowing streams. He substitutes for mathematics the principle of life, and looks in the movement of inanimate things for an indwelling soul. This is the animistic standpoint of human culture—the substitution of the biologic method of looking at the world for the quantitative or mathematical view.

The bare mention of these differences will suffice for the purpose of proving the necessity of separating these two groups of studies and for giving each its independent place in the curriculum.

II The second group includes whatever is organic in nature—especially studies relating to the plant and the animal—the growth of material for food and clothing, and in a large measure for means of transportation and culture. This study of the organic phase of nature forms a great portion of the branch of study known as geography in the elementary school. Geography takes up also some of the topics that belong to the mathematical or quantitative view of nature, but it takes them up into a new combination with a view to show how they are related to organic life—to creating and supplying the needs of the plant, animal, and man. There is, it is true, a "concentration" in this respect, that the mathematical or quantitative appears in geography as subordinated to the principle of organic life. For the quantitative—namely, inor-

ganic matter and the forces of the solar system—appear as presuppositions of life. Life uses this as material out of which to organize its structures. The plant builds itself a structure of vegetable cells, transmuting what is inorganic into vegetable tissue; so too the animal builds over organic and inorganic substances, drawing from the air and water and from inorganic salts and acids, and by use of heat, light, and electricity, converting vegetable tissue into animal tissue. The revelation of the life principle in plant and animal is not a mathematical one; it is not a mechanism moved by pressure from without, or by attraction from within; it is not a mere displacement or an aggregation, or anything of that sort. In so far as it is organic there is a formative principle which originates motion and modifies the inorganic materials and the mere dynamic forces of nature, giving them special form and direction so as to build up vegetable or animal structures.

Kant defined organism as something within which every part is both means and end to all the other parts; all the other parts function in building up or developing each part, and each part in its turn is a means for the complete growth of every other part. These two phases of nature, the inorganic and the organic, exhaust the entire field. Hence a quantitative study conducted in pure and applied mathematics and biology (or the study of life in its manifestations), covers nature.

It has been asked whether drawing does not belong to a separate group in the course of study, and whether manual training is not a study co-ordinate with history and grammar. There are a number of branches of study such as drawing, manual training, physical culture, and the like, which ought to be taught in every well-regulated school, but they will easily find a place within the five groups so far as their intellectual co-efficients are concerned. Drawing, for instance, may belong to art or æsthetics on one side, but practically it is partly physical training with a view to skill in the hand and eye, and partly mathematical with a view to the production of geo-

metric form. As a physical training its rationale is to be found in physiology, and hence it belongs in this respect to the second phase of the study of nature. As relating to the production of form it belongs to geometry and trigonometry and arithmetic, or the first phase of nature, the inorganic. As relating to art or the æsthetic it belongs to the third group of studies, within which literature is the main discipline. But beside literature there are architecture, sculpture, painting, and music to be included in the æsthetic or art group of studies. Manual training, on the other hand, relates to the transformation of material such as wood or stone or other minerals into structures for human use, namely, for architecture and for machines. It is clear enough that the rationale of all this is to be found in mathematics, hence manual training does not furnish a new principle different from that found in the first or the second study relating to nature.

III The first study relating to human nature, as contrasted with mere organic and inorganic nature, is literature. Literature, as the fifth and highest of the fine arts, reveals human nature in its intrinsic form. It may be said in general that a literary work of art, a poem, whether lyric, dramatic, or epic, or a prose work of art, such as a novel or a drama, reveals human nature in its height and depth. It shows the growth of a feeling or sentiment first into a conviction and then into a deed: feelings, thoughts, and deeds are thus connected by a literary work of art in such a way as to explain a complete genesis of human action. Moreover, in a literary work of art there is a revelation of man as a member of social institutions. The nucleus of the literary work of art is usually an attack of the individual upon some one of the social institutions of which he is a member, namely, a collision with the state, with civil society, or with the Church. This collision furnishes an occasion for either a comic or tragic solution. The nature of the individual and of his evolution of feeling into thoughts and deeds is shown vividly upon the background of institutions and social life. The work of art, whether music, painting, sculpture, or architecture, belongs to the same group as litera-

ture, and it is obvious that the method in which the work of art should be studied is not the method adopted as applicable to inorganic nature or to organic nature. The physiology of a plant or an animal, and the habits and modes of growth and peculiarities of action on the part of plants and animals, are best comprehended by a different method of study from that which should be employed in studying the work of art. The work of art has a new principle, one that transcends life. It is the principle of responsible individuality and the principle of free subordination on the part of the individual to a social whole. It is in fact the exercise of original responsibility in opposition to a social whole, and the consequent retribution or other reaction, that makes the content of the work of art. Further discussion is not necessary to show how absurd would be a purely mathematical treatment, or a biological treatment, of a work of art. Mathematics and biology must enter into a consideration of works of art only in a very subordinate degree. It would be equally absurd to attempt to apply the method in which a work of art should be studied to the study of an organic form or to the study of inorganic matter and forces.

IV The next co-ordinate branch includes grammar and language, and studies allied to it, such as logic and psychology. In the elementary school we have only grammar. Grammar treats of the structure of language; there is a mechanical side to it in orthography, and a technical side to it in etymology and syntax. But one cannot call grammar in any peculiar sense a formal study any more than he can apply the same epithet to one of the natural sciences. Natural science deals with the laws of material bodies and forces. Laws are forms of acting or of being, and yet by far the most important content of natural science is stated in the laws which it has discovered. So in the studies that relate to man, the forms of human speech are very important. All grammatical studies require a twofold attitude of the mind, one toward the sign and one toward the signification; the shape of a letter or the form of a word or the peculiarity of a vocal utterance, these

must be attended to, but they must be at once subordinated to the significance of the hidden thought which has become revealed by the sign or utterance. The complexity of grammatical study is seen at once from this point of view. It is a double act of the will focusing the attention upon two different phases at once, namely, upon the natural phase and the spiritual phase, and the fusion of the two in one. Looking at this attitude of the mind, at this method of grammatical study, we see at once how different it all is from the attitude of the mind in the study of a work of art. In grammar we should not look to an evolution of a feeling into a thought or a deed; that would be entirely out of place. But we must give attention to the literal and prosaic word written or spoken, and consider it as an expression of a thought. We must note the structure of the intellect as revealed in this form. The word is a part of speech, having some one of the many functions which the word can fulfill in expressing a thought. Deeper down than grammatical structure is the logical structure, and this is a more fundamental revelation of the action of pure mind. Logic is in fact a part of psychology. Opening from one door toward another, we pass on our way from orthography, etymology, and syntax to logic and to psychology. All the way we use the same method; we use the sign or manifestation as a means of discovering the thought and the scientific classification of the thought.

Much has been said in the Report of the Committee of Fifteen on the abuse of grammar in the study of literary works of art. The method of grammar leads to wonderful insight into the nature of reason itself; it is this insight which it gives us into our methods of thinking and of uttering our thoughts that furnishes the justification for grammar as one of the leading studies in the curriculum. Its use in teaching correct speaking and writing is always secondary to this higher use, which is to make conscious in man the structure of his thinking and expression. Important as it is, however, when it is substituted for the method of studying art it becomes an abuse. It is a poor way to study Shakspere, Milton, Chaucer, and the Bible

to grammatically parse them or analyze them, or to devote the time to their philological peculiarities, the history of the development of their language, or such matters. The proper method of studying the work of art is not a substitute for that in grammar; it does not open the windows of the mind toward the logical, philological, or psychological structure of human thought and action.

V There is a fifth co-ordinate group of studies, namely, that of history. History looks to the formation of the state as the chief of human institutions. The development of states, the collisions of individuals with the state, the collisions of the states with one another, these form the topic of history. The method of historic study is different from that in grammatical study, and also from that in the study of literary and other works of art. Still more different is the method of history from those employed in the two groups of studies relating to nature, namely, the mathematical and biological methods. The history of literature and science has many examples of misapplications of method. For instance, Buckle in his *History of civilization* has endeavored to apply the biological method and to some extent that of physics, apparently thinking that the methods of natural science, which are so good in their application to organic and inorganic nature, are likewise good for application within the realm of human nature. The reader of Buckle will remember, for instance, that the superstitious character of the Spanish people is explained by him as due to the frequency of earthquakes in the peninsula. In selecting a physical cause for explaining a spiritual effect, Mr. Buckle passed over the most obvious explanation, which is this: The people of Spain were for many centuries on the marches or boundaries of Christian civilization and over against a Moslem civilization. Wherever there is a borderland between two conflicting civilizations, a difference either political or religious, there is a sharpening of the minds of the people so far as to produce the effect of opposition and bigotry. A continual effort to hold one's religious belief uncontaminated by the influence of a neighboring people leads

to narrowness and to a superstitious adherence to forms. Narrowness and bigotry in religion are the foe of science and the friend to all manner of superstitions.

Mr. Buckle's work has interested people very much because it is an attempt to bring the methods of natural science into the study of human history. But it cannot be regarded as anything more than an example of the attempt to substitute for the true method in history a method good only in another province.

In biology the whole animal is not fully revealed in each of his members, although, as stated in Kant's definition, each part is alike the means and the end for all the others. The higher animals and plants show the greatest difference between parts and whole. But in history it is the opposite, the lower types exhibit the greatest difference between the social whole and the individual citizen. The progress in history is toward freedom of the individual and local self-government. In the highest organisms of the state, therefore, there is a greater similarity between the individual and the national whole to which he belongs. The individual takes a more active part in governing himself. The state becomes more and more an instrument of self-government in his hands. In the lowest states the gigantic personality of the social whole is all in all, and the individual personality is null except the supreme ruler and in the few associated with him.

The method of history keeps its gaze fixed upon the development of the social whole and the progress which it makes in realizing within its citizens the freedom of the whole. This method, it is evident enough, is different from those in literature and grammar, different also from the biological and the mathematical methods. In history we see how the little selves or individuals unite to form the big self or the nation. The analogies to this found in biology, namely, the combination of individual cells into the entire vegetable or animal organism, are all illusive so far as furnishing a clew to the process of human history.

The question might arise, where religion would be found in

these co-ordinate branches. Religion would, I think, make a sixth co-ordinate branch if it were introduced into the school, for religion persistently looks at every thing and event, every feeling, thought, and deed, in its direct relation to the Divine Reason. This is evidently a method very deeply separated from the methods in any one of the five co-ordinate branches of studies that have been mentioned in this paper. It is so different, in fact, that it furnishes a ground for removing the study of religion from the school in which the other branches are studied. The method of religion is essentially the method of authority. That of the study of science is esentially one of critical alertness and personal verification. The scientific method of mind is the most hostile of all to the religious; it saps all authority as such. The mathematical is to be included under the scientific method; so, too, is the grammatical; but not so the literary and historic methods. Literature professedly deals in fiction, in ideal presentations, in artistic wholes which are not found in nature. History, on the other hand, deals with authorities for the events which it narrates. Its dealing with historic authorities resembles in some respects that followed in the study of the Holy Scriptures, but in other respects, namely, in the treatment of the evidences, it resembles the scientific study of data derived from the observation of nature. But religion demands from first to last a complete surrender of the mind to the authority of revelation. On the one hand it is claimed by those who believe in separating the school and the Church that religious instruction should be surrounded by the solemnities and ceremonials of the Church, and that it should not be approached in the self-assertive, skeptical attitude of one coming from the lesson in mathematics or natural science, or even literature, grammar, or history. On the other hand, those who claim for the school a sixth co-ordinate branch of study—namely, religion—think that this argument for the separation of methods so widely asunder as these of religion and science has been entirely overrated. But they too would carefully guard against the encroachment of the religious mode of study into mathematics, botany, history, and grammar.

They would admit that the co-ordination is complete and that the separation of methods is necessary.

We can now see what is the relation of this inquiry into educational values to the questions of child-study and other topics in psychology, as well as to the Herbartian principle of interest. First and foremost the teacher of the school has before him this question of the branches of learning to be selected. These must be discovered by looking at the grown man in civilization rather than at the child. The child has not yet developed his possibilities. The child first shows what he is truly and internally when he becomes a grown man. The child is the acorn. The acorn reveals what it is in the oak only after a thousand years. So man has revealed what he is, not in the cradle, but in the great world of human history and literature and science. He has written out his nature upon the blackboard of the universe. In order to know what there is in the human will we look into Plutarch's *Parallel lives*. To see what he has done in philosophy, we read Plato, Aristotle, Leibniz, and Hegel. For science we look to the Newtons and Darwins. We do not begin, therefore, with child-study in our school education. But next after finding these great branches of human learning we consider the child, and how to bring him from his possibility to his reality. Then it becomes essential to study the child and his manner of evolution. We must discover which of its interests are already on the true road toward human greatness. We must likewise discover which ones conflict with the highest aims, and especially what interests there are that, although seemingly in conflict with the highest ends of man, are yet really tributary to human greatness, leading up to it by winding routes. All these are matters of child-study, but they all presuppose the first knowledge, namely, the knowledge of the doings of mature humanity. There can be no step made in rational child-study without keeping in view constantly these questions of the five co-ordinate groups of study.

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III

THE WORK OF THE HIGH SCHOOL[1]

The question, what can the high school do for the graduate of the elementary school? contains a variable factor, and therefore admits of a relative answer only; it depends on what this graduate is, and on what he knows. It depends on his age and maturity, his previous training, his acquired mode of mental work, his reading and other scholastic acquisitions, all of which are very definite factors in each individual case, but very indefinite if they are to be predicated of the graduate in general. His qualifications differ widely in the various cities of the country.

In one respect a definite answer to the query may be given: The high school can prepare the graduate of the elementary school for college. In its relation to the college, the high school is not a self-determining factor; it must rule its course by the demands made by the colleges. The requirements of some of the latter are such that it takes all the time of the high school to do the work prescribed and leaves little or no opportunity to add other studies. The requirements in languages, which deserve first consideration, have been growing. While a few colleges, such as Harvard, prescribe a test of power, as for instance the ability to read easy Latin at sight, in other cases the requirements are measured by the quantity of matter that has been read. In those high schools in which the classes preparing for college are required to take other studies in addition to those prescribed for admission to the college, the crowding of the programme may endanger thoroughness. The quantity of reading matter which has to be "finished" may be an obstacle to thoughtful reading. Lessons

[1] A paper read before the Department of Superintendence of the National Edutional Association, at Jacksonville, Fla., February 20, 1896.

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are made long, and less time and care are given to each part both in regard to preparation and recitation; the extent of lessons may militate against instructive study, and breadth of reading may be gained at the expense of depth.

It is not pertinent to our subject to enter into a discussion of requirements for admission to college, and to raise the question whether a more limited amount of Latin and Greek reading, and a fuller knowledge of a smaller number of chapters and books in classic authors, are not the best test of qualifications for college work.

To awaken a desire to go to college, to induce and to encourage high-school pupils to look forward to, and prepare for a college course is a most important aim. It is in the interest of the pupil to attain the highest development of his power; it is in the public interest to perpetuate the intellectual treasures of the race by training its most talented children in the highest culture of the age. The practical difficulty which confronts the high school, and in fact, all preparatory schools, is the lack of uniformity in college requirements. In cities near which a leading college is located this difficulty is less great, because there is virtually but one college to which the pupil aspires to be admitted. In other parts of the country, the choice of college among members of the same preparatory class differs widely; some select Harvard, Yale, or Princeton, and some prefer other colleges. How to meet this problem by class instruction is difficult to see. Class instruction is necessarily identical; yet, here the problem arises now to prepare by class instruction for requirements which differ with the college which the individual pupil selects. One mode of meeting it would be to take in each study the highest demand made in the same by any prominent college and prepare the whole class for it. This solution, however, is not likely to meet with general favor, since the demand in each particular case is high enough, and the solution offered would be the combination of the highest demands to form the common programme. Another plan which seems more feasible is, to take the average amount of preparation required by the leading colleges

and to arrange the programme of the last year of the high school in such a way as to set apart a recitation per day in which the pupils can receive individual instruction in the additional preparation which may be required for the college of their choice.

The teacher of this class should, of course, be a college graduate, and especially well qualified for this work. As far as the classes preparing for college are concerned, a very definite answer to our query may be returned: the high school should encourage its pupils to aspire to a college education, and should prepare them for any college that they wish to enter. Every other consideration should be subordinated to this aim, as far as the college classes are concerned.

In many high schools the number desiring to enter college is a very small fraction of the total number of the pupils. Most of them look upon the high school as the last step in their education. The course of study of the college class cannot altogether apply to the high school at large, because the latter is serving not a single, but a composite purpose; it has at least a twofold character. It is not only a preparatory, but also a finishing school. It does not look for its aim in one direction, but has various objects in view; the college, life, and, last but not least, the subjective interests of the pupil himself.

While elementary education has the pre-eminently psychological aim of developing the mental powers, higher education, as represented by the university, has for its aim the transmission of the highest culture of our civilization and of the most permanent spiritual conquests of mankind to minds sufficiently mature to grasp them in their fullness. The university is the eternal lamp on the altar of civilization in which the fire of human culture, brought from heaven by genius, is kept alive.

The aim of the European university is easily defined; it is absolutely specialized and is emphatically a professional school. Theology, law, medicine, and philosophy (including philology, science, mathematics, and technology), each pointing to a special vocation, form its divisions or faculties. It is less easy

to define the American college, because it contains less specialization and more of the general educational features.

The high school, in its character as a finishing school, has been called the People's University, because its aim is to introduce the pupils to the spiritual treasures of the race. It is the people's university in regard to the fact also that its instruction is largely elementary and popular. The mode of teaching the high-school pupil must differ essentially from the college method, because he lacks the preparatory training which the college presupposes. The high school is a continuation of the elementary school; hence its work, while of a higher range, must often be elementary in presentation and drill. In the college the course may be elective; in the high school it should be largely prescribed.

The aims of high-school education might thus be defined:

1. The high school should communicate to its pupils the elements of the highest culture—achievements of the race.

2. It should bring the pupil into close contact with the spiritual life of his country and his time.

3. It should awaken and widen the civic and higher human interests in the pupil, and arouse and stimulate the desire for an active life in their service.

To say that education should make the pupil more human and more divine, would be a briefer statement of these aims. To make him more human, means to make him understand more fully the common interests of life, the laws of nature whose service sustains the industries and the arts of communication and transportation characteristic of our age; it means to perfect him in the arts of expression by which the intercourse among human beings is carried on; it means to teach him to comprehend through historical and philosophic studies the institutional life of man, on which all civilization rests.

To make the pupil more divine, means to teach him to discover in the ethical law of his own soul the never silent voice of the Deity, commanding him, in ever new revelation, to make his ethical self assume external reality in deeds. Not only in his own soul, but also in the external world, in whatever is

good or beautiful, the divine voice speaks to man; to enlist the youth in the service of these, means to make his soul more divine.

In framing the course of study of a high school three standpoints seem possible: We may consider chiefly the demands of life, or greatest weight may be given to proficiency in leading studies, or highest emphasis may be laid on the growth and development of the learner and on his highest interests. For the sake of brevity, let us call these the realistic, the scholastic, and the ideal standpoints. It goes without saying that neither of these has ever been urged to the exclusion of the rest, but more stress has been laid occasionally on one than on the others. From the emphasized realistic standpoint there has resulted the introduction of studies that were supposed to prepare especially for life. A purely realistic principle in the sense of preparing for a special calling cannot well be applied to the high school, because it would require a specializing of instruction which a school for general education could not undertake. A high school organized on this principle would be a trade school or a business college.

In fact, the best preparation for life is that which develops the strongest individuality, honesty, and truth, attentive intelligence, quick-witted, thoughtful industry, and persevering power of application. There is no better preparation for life than found in these postulates of the ideal standpoint.

The scholastic standpoint would determine the programme of the high school by setting forth the needs of each individual study from the standpoint of the special teacher, and letting the totality of such demands constitute the programme. Imagine the procedure in attempting to frame a course of study on such a basis; the teacher of each specialty—of Latin, Greek, mathematics, natural science, etc.—might be asked to formulate his views as to what the course of study in his special department should be. The almost necessary consequence of this mode of inquiry could be forestalled, since the conditions are clear. It would probably lead to an admirable

and exhaustive statement of the educational needs and conditions of every study, that might be of great permanent value and map out lines of teaching that could safely be followed. Excellent monographs on the high-school course might be thus produced and a unique corner stone for high-school programmes might be laid.

But, on the other hand, the danger of certain defects in a plan designed from an exclusively scholastic standpoint is evident. The sphere of life in which any human being moves and his circle of interest seem, of necessity, to him, of exalted and primary importance. Every teacher inclines to think most highly of the specialty in which he works, or he would not have selected it, or, having embarked in it, could not have become eminent. The specialist is likely to be keenly conscious of the immense field of his science and of its relative importance compared with other branches. The imperfections of the learner also, whom he is instructing, appear to him more glaring in the unconscious contrast with his own abundant information and proficiency. He will almost inevitably be driven to the conclusion that the pupil should have better preparation before he begins his work in the high school, and that a larger share of time should be given to it after he has commenced the study. Unity of work is all the more necessary because, while in the elementary school the pupil is all day long in the same room and under the instruction of the same teacher, he passes in the high school from room to room and is taught by a number of persons, whereby that personal unity of work ceases which is implied in the instruction by one teacher. It is all the more necessary that a unifying principle should underlie the course of study.

Even after the work in each branch of instruction has been mapped out by special teachers, the series of plans so obtained will not yet form a course of study. It will require the hand of an educator to give unity to these various demands by adjusting and combining them in accordance with psychological and ideal principles.

The psychological demand remains pre-eminent. A course

of study must be formed not merely by considering the requirements of the various sciences, but by the laws and needs of the growing soul of youth.

The distinction between formal and material culture is an important one, because it recognizes that instruction in any science must serve a double end. It must, in the first place, supply information to the mind and add to the treasures of positive information; it must, on the other hand, through the mode of presentation, as well as through its content, give strength to the mind. Culture that is simply formal, which strengthens the mind without enriching it; or culture that is merely material, which fills the mind without giving to it strength, would be pernicious, if such a thing really existed. Formal and material culture are like the nitrogen and oxygen of the air; pernicious or hurtful when separated from their natural union, but life-giving when properly combined. In high-school education the dynamic forces in each study, the elements which give power, should be emphasized rather than the mere scholastic attainment. Any branch thus taught gives proper preparation for life, because it at once enriches and invigorates the soul and enhances individual worth.

The idea of educating the child must be the dominant principle in regard to which the aim of proficiency in any study stands in the relation of means to an end. High-school education differs from that of the elementary school and from that of the college, yet partakes of either; it is the connecting link between the two radically different educational principles which the extremes of school education, the primary school and the university, contain. All education leads the mind to seize the world and hold it in spiritual grasp. The principle of the elementary school is that the world adjusts itself to the child in order that, after a while, the youth may learn to adjust himself to the world. In presenting information we select, we arrange, we grade; we use all contrivances and devices which ingenuity may indicate to help the child seize the elements of knowledge with his yet feeble grasp. As the household adjusts itself, in a measure, to the imperious baby, so serious

science and the rigid world of knowledge must be modified and altered and rearranged to be suitable to the childish taste and power of assimilation. At the other end of the school career stands the university; where the demand is made that the student forego all his personal inclinations, his love of ease, and compel his mental power to grasp the deepest thought, the most difficult system of science in its independence, unadjusted to the feeble strength of the seeker after truth. While, at the beginning of man's education, art predominates over matter—the art of teaching over the material of instruction (of which little can be given at a time, with much art in presenting it)—there is, at the end, in university teaching, much matter and less artifice in presentation. Midway between these two extremes stands the high school, in which a method must prevail which, while still considering the learner's difficulties, and therefore using the art of pedagogics in presenting subjects, lays more and more emphasis on the *matter* of instruction and less on pedagogical devices.

The high school continues, in the first place, the work of the elementary school; and, in the second, it supplements it by an entirely new range of work. The view of the world in space, which the pupil has derived from his geography lessons, is continued, in a measure, in the instruction in natural science, and is supplemented by the view of the world in time which history furnishes; and also by a glimpse at the spiritual world of institutions which ethics and philosophy present. On the other hand, the various elements of spatial relation, which underlie arithmetic, are supplemented by the higher mathematical instruction in algebra and geometry.

In the process of learning there is a double activity. Instruction makes the external world ideal, since every step in becoming acquainted with the material things in the world means that, through the process of learning, facts become ideas. Learning, however, requires not only the process of receiving information, but also that other activity which starts with an idea and gives to it external expression through language, the exercise of skill, or through work of any kind. Thus

we find a second element in the process of learning, by which the ideal within becomes a reality without. When the mind is receiving information, the external is made internal; while writing, or drawing, or speaking, or any kind of intelligent action, makes an idea actual and external. The proper play of these two sides constitutes the fullness of the educational process. Assimilation and activity, or receptivity and spontaneity, are the two poles around which the world of the school must revolve. Where one factor predominates over the other too much, readjustment is needed. In a passing way it may be said that, by spontaneity or activity on the part of the child, we do not mean that reprehensible attitude of the pupil in receiving knowledge which makes him a critic in the sense of inducing and encouraging him to look for error and fault in the work of others. This attitude may be encouraged too early and too much, at the expense of thoughtful and sympathetic appreciation. The critical faculty need not be kept dormant; it will find sufficient exercise in grasping the leading thought in the lessons, and in sifting critically whatever is important and chiefly significant. A noble thought in this direction occurs in the Report of the Committee of Ten, where the suggestion occurs that the first instruction in natural science should dwell on the idea of preservation and protection in nature, instead of beginning with destructive analysis.

Feeling is connected with spontaneity and receptivity, the typical activities of will and intelligence, and forms their more or less distinct echo. These three phases of the soul, intelligence, volition, and feeling, remain the threefold aim of training which culminates in the cultivation of thought, energy, and refinement.

Training of the will is, of course, implied in every kind of conscious activity. Whenever a task is imposed, or a lesson studied, and the pupil must fix his attention on it, will-training is involved. Character becomes fixed by life, and similarly will is formed and influenced by the life in the schoolroom, which should be made to resemble closely the life-relations which surround the pupil. The tone of the high school differs

necessarily from that of the elementary school, because the life-relations of the youth of fifteen differ greatly from those of the child of six or seven. He approaches intellectual maturity and self-dependent manhood and womanhood; he takes part in the life of the household on the basis of relative equality with adults. Hence the high school should reflect in its discipline, and in the tone of intercourse between teacher and pupil, the change in the age and standing of the child; the teacher should be rather a leader than a ruler.

Another important element in the will-training of the high school is the introduction which it can give the pupil to an understanding of the ethical world, in society and state. Instruction in civics has been added within the last decade to the course of study of many high schools. Instruction in ethics and the elements of mental philosophy would seem at least as necessary, because the principles which underlie human action are worthy of the pupil's study and should be comprehended by him as unalterable and fixed laws, reasonable and beneficent, to which the individual owes not only obedience, but active service.

Ethics as well as civics should be taught, because the pupil will not only be a citizen, but, more emphatically, a human being, and should be led to think about his duties and not merely know them through the routine of life.

Among the studies which are most closely allied to the will, and which subserve the idea of making the spiritual within real without, the arts of expression should stand in a central place, extending from one end of the course to the other. There is a now obsolete definition of the difference between elementary and higher education which says that elementary education is to teach the child to absorb knowledge, while higher education is to instruct him how to communicate it. The distinction is hardly valid to-day, but there is no doubt that we expect as a result of higher education improvement in expression, clearer, richer, more forcible speech; writing, more logical in thought and more correct and beautiful in form. It seems an error to discontinue altogether the practice of pen-

manship after a pupil has entered the high school. A good handwriting, that does not offend ordinary æsthetic taste, is one of the characteristics of culture, and should therefore not be neglected in high-school education. As a mode of expression, drawing, too, should retain its place as an obligatory study. There is a peculiar connection between studies that cultivate the art of expression and the life of the soul within. The physiological and mechanical element involved in these studies seems to open nerve-channels from the brain to the external world, by which the soul finds a readier way to manifest itself and grow in strength and activity. The study of expression is of higher than merely formal value; it reacts on all the forms of receptivity, and knowledge becomes assimilated more easily and more thoroughly, when there is a corresponding activity in which it is put to use. Drawing necessitates keener observation; expression through language requires clearer ideas; thus spontaneity helps receptivity, and activity helps assimilation.

There is no subject of greater importance in the high-school course than that of language. I speak of it here simply as a mode of expression, which, however, is but one side. As a mode of expression the English language, in all its forms—in composition, recitation, declamation, oratorical contests, and extemporaneous speaking—is a study which should ever be placed first. High-school education which does not aim primarily at the cultivation of refined and correct English is faulty.

As a further study in the direction of volitional training, gymnastics and calisthenics should not be denied a place. The control of the will over the body which is the aim of these studies, with the many things that depend thereon as consequences, is indispensable in the high-school programme. Turning now to the side of receptivity, or to the studies in which the pupil is to assimilate, physiology perhaps should be placed earliest in the course. It is connected, evidently, on one side with gymnastics and calisthenics. Its importance for the pupil renders it desirable that all, even those that leave the school after the first year, should partake of this instruc-

tion. It is a natural science subject and should follow natural science methods by being objective, or illustrative and observational in teaching. The anatomical element in psychology should be limited; and those subjects most necessary for self-preservation (especially hygiene), should occupy the first place. The principal topics should be: How to take care of the body in health and disease, together with some information concerning the treatment of ordinary accidents, and perhaps some ideas in connection with nursing the sick. Life interests should predominate over scholastic interests. It should be one of the characteristics of a pupil who has had a higher education, that he has better resources in the contingencies of human life. Algebra and plane geometry form the indispensable continuation of the arithmetical instruction in the elementary school. The psychological importance of algebra lies in the pure mathematical reasoning which it requires; while objective teaching is needed at the outset—when the matter is new to the child—the emphasis must be laid on that part which gives the peculiar and necessary training for which the study has a place in the high-school curriculum, namely, strict and clear reasoning; self-activity may, and should be engendered, by encouraging independent and original solutions on the part of the advanced pupil. Lessons in elementary bookkeeping may perhaps be placed in the earlier year of the course.

Of the natural sciences, botany, physics, and chemistry, together with physiology or biology, seem sufficient for the four years of the high-school course.

On the side of the humanities, general history should occupy a prominent place; but I would add to it lessons in United States history, of much less elementary character than the corresponding study in the elementary school. In the political life of our own day, economic questions stand in the foreground. While the elements of history taught in the lower schools give a child a good idea of the growth and development of our political institutions, a maturity of mind is required for the comprehension of the economic and civic

topics which the pupil in the elementary school does not possess, and which is too important to be omitted altogether. A one-volume history of the United States, somewhat in the style of Green's *History of the English people*, with more stress laid on the last fifty years than the earlier history, would be a valuable addition to literature and should be utilized in high-school work. The necessity for the study of political economy in succinct form becomes apparent from these considerations.

Besides ethics, the elements of mental philosophy should have a place in the higher grades of the high school; both on account of the peculiar training which this study gives, and also because it produces a deeper insight into those profound problems which have always formed the center of human thought. If an enlightened view of the world is to be one of the results, this study may be granted a place, to advantage, in the university of the people. Connected therewith should be the lessons in ethics; including rules of conduct. Ethics will not make a human being moral, but it will deepen moral convictions by showing the nature of ethical obligation and making ethical relations and principles clear and definite.

Another study in which the high school should continue the work of the grammar school, and also supplement it, is that of art. If higher interests are to be inculcated, they will natually group themselves around the ideas of the true, the good, and the beautiful. The art-feeling is developed in the form of music in the elementary school; in the high school musical instruction should be continued and raised to a higher level, by bringing to the notice of the pupil the noblest works of genius, as far as they can be brought into the schoolroom. Singing should be a general exercise, not simply for the purpose of art education, but also for the moral cohesion which joint singing lessons give to a large school, and for the influence which it has on the cultivation of the sentiments. There is another side of art which the high school cannot well neglect: representative art. If drawing lessons form part of the curriculum, they should be connected with the history of ornament and historical design. In addition to these features, the study

of the history of art, grouped around representative paintings, or works of architecture and sculpture, should be embodied in the course. The influence of art on national life appears on every page of history. The art-instincts among our people, now finding expression in their love of good music, should receive cultivation in higher instruction. In one form at least, art is studied in every high school in the country—in the form of literature, of which the artistic side, the sense of the beautiful, deserves additional emphasis.

Language, the most important topic of higher education, should not be forgotten in this connection. It was discussed in another place as a mode of expression; it should here be spoken of as a subject of information. The universal element in language, grammar, and the laws of classification forms the proper study of the elementary schools. In the high school the study of grammar should be extended in two directions. It should rise to the study of style and rhetoric in one direction, and it should also trace briefly the historical development of the language, through a brief course of historical grammar, such as is found in Morris's little volume. Besides the study of law in language which grammar, rhetoric, and history impart, there is, furthermore, the study of language in literature. In the study of literature great progress has been made in the last ten or twelve years, by bringing the children of high-school age, and even below it, into direct contact with the great authors of the English tongue.

The additional suggestion might be submitted in connection therewith, that in the selection of authors a historical principle should be observed; that is to say, that when the four years of high-school reading are summed up together, they should contain the typical authors of the various periods of English literature; laying stress on more recent periods and reserving a few authors of older times, Chaucer and Spenser, for the senior year, after historical grammar has been studied to some extent.

A further suggestion is not an innovation, but a revival of an older custom, which unfortunately is dying out. English

literature, like the Greek, has the good fortune of having one grandest representative. Just as with the Greek boy the study of Homer was an education in itself, so for the English or American high-school boy or girl, the study of Shakspere contains the elements of the grandest literary education. While Shakspere is read incidentally with other authors, in every high school in the land, it seems as if he should be made the special object of study for a longer period; say, for a whole year, with two or three lessons per week, in the senior class. He is, in truth, all mankind's epitome, and should not be treated on a level with other authors, but singled out as an object of special attention. A last demand, and we may leave the subject of language. History of literature has been rejected as a substitute for literature itself, and the study of authors has taken its place. As a substitute for literature the study of the history of literature is objectionable, but it has nevertheless a place in the high school. After a fair knowledge of literature has been acquired through the reading of authors, it is proper that the development of literature, its law of progress, should become the object of special attention; and a brief history of literature seems a fitting close to the study of authors.

While English stands in the foreground of linguistic training, at least one foreign language should be required of every high-school pupil. To be conversant with one tongue means to be inclosed within the more or less close walls of one civilization, without being able to look upon the human world beyond by direct inspection. The study of another tongue leads to a better acquaintance with one's own, by offering a new exercise to the faculties of the learner. In studying the grammar of the vernacular, the process is analytic. From the language the grammatical rule or law is inferred by analysis. In the study of the foreign tongue the process is reversed, inasmuch as the grammatical rule or law is placed before the pupil and he is taught to construct sentences in the foreign tongue; the process here is synthetic.

On the side of "material" training, the gain is evident and

constant. It has been said that an additional language means an additional soul. To the student who masters any foreign tongue, a new world opens. His vocabulary becomes more copious and choice; he attains a clearness and precision in the use of English that could not otherwise be attained. Every Latin, French, or German word which he looks up in his dictionary has several English equivalents, and the choice which he is compelled to make requires a distinction between synonymous terms and kindred ideas, and makes him conscious of the finer shades of differences in their meaning.

In regard to the choice of the one language to be studied, Latin should be placed first, German second, and French third. The chief, though not the only reason for assigning the first place to Latin, is found in the formal training which it may be made to impart. Like the German, it is highly inflectional, and requires the most energetic exercise of attention and thought.

Latin contains, moreover, the key to that part of the English vocabulary which the child finds most difficult to understand, and which most frequently occurs in higher literature.

The question how to distribute the studies over the four years of the course deserves consideration. There is one fact on which special stress should be laid. The four years of the high school usually cover the last steps in the transition from childhood to manhood, with the almost sudden mental changes which this implies. This enables the high school to place at the end of its course those studies which require mature power, and which appeal to the adult's interests rather than the child's. The principles which determine the arrangement of studies may be briefly summed up as those of importance, of inter-dependence, and of difficulty or interest. To illustrate: Physiology should be placed in the first year on account of its universal importance for the conduct of life. Algebra is placed in the first year, and physics in the second, because the latter presupposes algebra and uses its processes.

The history of English literature is placed in the senior year, because the basis of its generalizations must be supplied

by the reading of authors in the earlier years; moreover, the tracing of relations between literary and political phenomena is a fit task for the maturer mind.

Besides the distribution of the studies over the four years, a further problem needs consideration, namely, What part of the whole subject-matter should be presented and taught to the pupils?

In the inductive and political sciences, in particular, the field of knowledge is practically endless in every direction, and a law of limitation becomes a necessity. The consciousness of the magnitude and high requirements of the science which the scholarly teacher entertains, if it is not curbed and balanced by his pedagogical tact, may lead to the crowding of programmes with subject-matter, and an impatient haste in teaching that is fatal to educational progress. The whole field of science cannot be covered, and some principle of selection must be found.

One solution would be to single out a few leading topics, *e. g.*, twenty or thirty typical experiments in physics or chemistry; or, to illustrate in another direction, ten or twelve authors in English literature, and to teach these very limited selections with scholarly thoroughness, rendering the limited ground that is covered by instruction the type of the whole realm of knowledge beyond, and making the method used a key by which the pupil may unlock the other chambers in the house of science. If the whole realm of knowledge cannot be conquered, a part at least may be so taught that the known is the type of, and becomes the key to, the unknown which lies beyond it. Laboratory work in physics, chemistry, biology, and botany is being done in many high schools in the country. In history, too, a method of investigation, by the reading of authorities in connection with each topic, has been recommended, and is, to some extent, practiced. The laboratory method in natural science is vastly superior to the now obsolete exclusive text-book method, which was used in some places a generation ago.

The study of natural science loses its value as a means of

cultivating the faculties, when the method employed fails to lead to the observation of, and experimenting with, the objects of nature. The tools which Providence has given to man for his life in nature are his senses and his hands. Instruction in science becomes unprofitable when it is not based on the pupil's own observation and activity.

Yet, while progressive high-school teachers agree on laboratory work in natural science, another element should receive equal consideration. Just as necessary as an acquaintance with the archetypal forms of nature by direct inspection, and of the observational facts by direct experiment, is the unifying, reasoning process, which sits enthroned above the myriads of facts and is as important a condition of observation as the activity of the senses and the hands. Reason, with its generalizing powers, is the compass which alone prevents the student from becoming bewildered in the maze of details.

Not only the typical facts, but the leading lines of the whole field of the study should be surveyed by the pupil. These leading lines, however, cannot always be taught by experiments performed by the pupil himself, but he must receive some truths at second hand through experiments which he witnesses but does not perform, and by literary communication through text-book and lecture. The total elimination of text-book study by laboratory work would be an extreme that does not commend itself. The individual scientist who does not know a hundredfold more of nature than he has learned from his own personal experimenting would be comparatively ignorant. Thoroughness in a limited field is not at all opposed to a certain comprehensiveness of information. It is in fact aided by a general acquaintance with the leading lines of the subject. What reader of Gibbon's *Rome*, when opening a new volume, would not feel aided by a preliminary comprehensive survey of the period in an encyclopedia or brief text-book?

The old method of the literary study of natural science, which sacrificed thoroughness to comprehensiveness, and depth to breadth, was vicious; but the opposite course would

be as great an error. Generally speaking, thoroughness may become, and at times has become, a fetich to which hecatombs of vital educational interest have been slaughtered. For instance, to keep a child in the elementary school on one topic for the purpose of attaining ideal perfection until living interest and ambition are killed, and instruction becomes irksome, would be paying too high a price for thoroughness.

These considerations will help to formulate the principle of presentation in high-school work. There should be, in the first place, the thorough study of detail in connection with some typical subjects, limited in number. There should be, in the second place, the study of leading lines and the comprehensive survey of important principles and laws.

This principle is of almost universal application. In the sciences it would mean the proper combination of laboratory and text-book work, with perhaps a preponderance of the latter. In literature it would mean a preliminary study of authors, followed by the history of literature. In history it would imply a survey of general history, followed, not preceded, by what has been called the "intensive" study of some period. The proper selection for the latter purpose would be the history of the United States in its political and economic features, since the adoption of the Constitution.

The tone of the high school in lessons and conduct should be manly. The instruction and discipline which it imparts should be worth a man's time to give or take, and worthy of adult intelligence and effort. The high-school years, as we have seen, are the period of rapid transition from childhood to manhood and womanhood.

In handing the treasures of learning to the little child of the elementary school, the teacher has to stoop so that the child may be able to reach his gifts. In teaching mature youths, the teacher must stand erect and cause the youth to lift himself toward the gift held out to him from the height of manhood. Thus only will he learn to grow. The lower classes of the high school still represent childhood, the older classes the youthful adult. The method of teaching should corre-

spond to these conditions of nature, and rise from elementary and early beginnings to scholarly interest and effort. A manly tone should permeate the whole school. The duties of citizenship should be distinctly foreshadowed by the spirit of the discipline. While the teacher's will was largely the rule of the elementary school, the governing powers of the high school should be obedience to the reasonable law of the school, based on the exigencies of the work to be carried on, and a proper respect for the rights of others. The impersonal element of law gradually supersedes personal authority. In instruction, too, the tone should be manly. The high-school pupil shows in his social life instinctively where he belongs. He gravitates naturally toward the adult. The boy or girl seeks more freely the society of those older than himself. His relation to his parents changes from submission to companionship, and begins to assume a little of a sisterly or brotherly aspect. The circle of his interests coincides more and more with that of the adult. His home life has changed, and he is charged in not a few cases with the duties and responsibilities of a grown person. School had better recognize these facts of life and turn its steps in the same direction. It must take cognizance of this evolution, and cease to supply food for babes when nature calls for the spiritual nourishment of the adult.

The age of the high-school pupils, advanced as our statistics show it to be, suggests their treatment. They will be as old when they finish the course as the college graduate was a few generations ago. A glance at the biography of any of the eminent Americans of the earlier part of the century shows this fact. Motley and Bancroft graduated from Harvard at the age of 17; Longfellow, Emerson, and Whitney the philologist, graduated from Bowdoin, Harvard, and Williams colleges at 18; Daniel Webster and Charles Sumner at Dartmouth and Harvard, at the age of 19.

Those text-books should be preferred that command the respect of the mature mind. Green's *History of the English people*, and Shakspere, may be mentioned as typical illustra-

tions. Whatever of current literature and thought moves the interests of the cultured world should find a ready place in everyday work. The high school should not only prepare for life; it should be a piece of the life of culture such as the best American men and women lead or desire to lead.

High-school education, if the unjust charge were true that it kept youth away from the interests of life and made him insensible to its pulsations, because it locks him up in the world of the past and of scholastic and unreal abstraction, would indeed tend to unfit for life and be a failure.

The opposite course is the one which the high school should pursue with the graduate of the elementary school: It should aim at bringing him into the closest touch with the highest interests of current spiritual life, and to fill him with a strong desire for wholesome activity in the world of reality.

The course of study should be sufficiently elastic to enable the teacher of each subject to regularly direct attention to whatever information of higher interest the day may bring, or to read solid articles on vital questions in magazines like the *Arena* or *Forum*. The lessons in English should allow a good margin of time for magazine and library reading.

During the years that a pupil is in the high school, the words of Terence should apply to him: He is a man, and nothing that relates to man should be without interest to him.

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IV

THE SPIRIT AND IDEALS OF THE UNIVERSITY OF MICHIGAN, (I)

The University of Michigan is an outgrowth of the policy inaugurated more or less consciously by the old Congress when it inserted in the "Powers to the Board of Treasury," voted July 23, 1787, the clause: "Not more than two complete townships [of land] to be given perpetually for the purposes of an university, to be laid off by the purchaser or purchasers as near the center as may be, so that the same shall be of good land, to be applied to the intended object by the Legislature of the State." Of the universities founded in pursuance of this policy, none has attained a higher rank or exerted a wider influence. Moreover, in working out the university problem, Michigan received no aid from the other States whose universities are older, but was obliged to pioneer the way both for herself and for others.[1] A State university, a pioneer State university, and the most widely influential of all the State universities—her spirit and ideals are matters of more than local and temporary interest. However, this spirit and these ideals cannnot be successfully delineated separate and apart from the history of the university and of the State system of public instruction. This history falls into three divisions: from 1817 to 1837; from 1837 to 1852; and from 1852 to the present time.

The charter granted by the governor and judges of the Territory in 1817 ordained that "The Catholepistemiad or Uni-

[1] Instruction was first given in the Ohio University in 1809, and in the Indiana University in 1823; the faculty of the first was organized in 1822, and of the second in 1829; but neither institution exerted an appreciable influence upon the organization of later ones. On the other hand, both of these universities, and especially the second one, have more or less followed the lead of their younger and more powerful competitor.

versity of Michigania" should consist of thirteen "didaxiim" or professorships, viz.: universal science, literature, mathematics, natural history, natural philosophy, astronomy, chemistry, and the medical, economical, ethical, military, historical, and intellectual sciences. The thirteen "didaxiim" were divided into sixty-three sciences, many of them bearing names never seen in a dictionary. The "didactorim," or professorial body, appointed and commissioned by the governor, and clothed with corporate powers, was put in charge of all grades of instruction in the Territory. It should have power to establish colleges, academies, schools, libraries, museums, atheneums, botanic gardens, laboratories, and other useful literary and scientific institutions, and to provide for and appoint directors, visitors, curators, librarians, instructors, and instructrixes, in, among, and throughout, the various counties, cities, towns, townships, or other geographical divisions of Michigan. Instruction should be gratuitous to all students who were unable to pay the small honorarium that was fixed for lectures. Salaries should be paid from the Territorial treasury, and taxes were imposed to meet the expenses. Thus "The Catholepistemiad or University of Michigania" was the name given to the whole contemplated organization of public instruction in the Territory; and no little acumen is shown in the suggestion that the scheme was suggested to Judge Woodward, who drew the charter, by the University of France, which had been founded in 1806. The original significance of the university it is important not to lose sight of. The breadth of the plan was quite equal to its pedantry. As the population of Michigan at the time was not more than five or six thousand, "The Catholepistemiad" was a large draft upon the future; but, large as it was, the bill has been in good part honored, as we shall see.

Little was done under this charter, and four years later it was repealed. The charter of 1821 established the University of Michigan in Detroit, placing it in the hands of a board of Regents to be appointed by the governor, and declared its objects to be to provide the inhabitants of the State with the

means of acquiring a thorough knowledge of the various branches of literature, science, and the arts. The Regents should, from time to time, establish such colleges, academies, and schools, depending upon the university, as they might think proper and the funds of the corporation might justify. The taxes for education were not renewed, and the university was left wholly dependent upon its landed and other estates. Persons of every religious denomination were made eligible to the Regency; nor should "any person, as president, professor, instructor, or pupil, be refused admittance for his conscientious persuasion in matters of religion, provided he demean himself in the proper manner and conform to such rules as may be established." While this charter cut away the pedantic features of the earlier one, it still perpetuated the idea that the University of Michigan was the name of the educational organization of the Territory.

The charter of 1821, like that of 1817, had little more than an ideal existence. It does not come in my way to speak of the educational work that was done under it. The Supreme Court, however, has decided that the corporate life of the University of Michigan is continuous from 1821 and 1817; and high authority has said that the grand conceptions of those early years "made easy the acceptance of the large plans of educational organization which were adopted" at the admission of the State to the Union. "In both those charters," says President Angell, "what we may call the Michigan idea of a system of education, beginning with the university and stretching down through all the lower grades to the primary school, was distinctly set forth."[2]

The decade 1835–45 was a most fruitful one in the history of American education. It has been appositely called "our educational Renaissance." In that decade the first State board of education was created; the State superintendency first became efficient, if indeed it did not first appear; the first local superintendents were appointed; the first teachers' insti-

[2] Oration delivered at the Semi-Centennial celebration of the organization of the University of Michigan, 1887.

tute was held; the first normal school was founded; the first school libraries were established; and, perhaps most significant of all, vital connection was first effected with the schools of Germany. Professor Bache and Professor Stowe in this period made their well-known reports, the first to the trustees of Girard College, and the second to the legislature of Ohio. American students in small numbers had been resorting to German universities since 1815; but now the German educational spirit and ideals began to make themselves really felt. In 1831 M. Victor Cousin made to the French Minister of Public Instruction his celebrated report on the state of public instruction in Prussia. Sir William Hamilton published his *Edinburgh Review* article on this report in 1833; the next year Mrs. Austin's translation appeared in London, and the year following it was republished in New York. But, what is most to our purpose, in 1835 Cousin's report furnished the norm of the school system of Michigan. From that time it has been the boast of the State that her system of public instruction is based on "the Prussian ideas," the ideas, viz.: that the State should create, support, and supervise a system of free public instruction, comprehending the three grades, elementary schools, secondary schools, and the university. The Constitution of the State, framed in 1835, incorporated these ideas in outline. The State superintendency that it provided for is said to have been the first in the country.

Within two months of the admission of the State to the Union, laws were enacted organizing the State educational system. The university was intrusted to a board of twelve Regents and a chancellor, appointed by the governor and the senate, and clothed with the appropriate powers. The university should consist of three departments: literature, science, and the arts; law; medicine. The professorships were provided for, and the Regents forbidden to create new ones without legislative sanction. The fee of admission to the university never should exceed ten dollars; and the university should be open to all students in the State who might wish to avail themselves of its advantages without charge for tuition, under the

regulations prescribed by the Regents, and to all others under such restrictions and regulations as said Regents should prescribe. The most novel feature of the law was due to "Catholepistemiad" influence. It was made the duty of the Regents, in connection with the State superintendent of public instruction, to establish "branches of the university" in different parts of the State, with the proviso that such branches should not confer degrees. Connected with every such branch there should be an institution for the education of females in the higher branches of knowledge; also a department of agriculture, and a department especially appropriated to the education of teachers for the primary schools. At first the branches were expressly authorized by the legislature, but soon this function was absorbed by the Regents. Several branches were established in the principal towns of the State; but eventually the question of their constitutionality was raised, and they were discontinued after a few years. While it is perfectly obvious that the branches, had they been continued, would ultimately have destroyed the university, or have kept it small and weak, owing to the dispersion of funds, it is by no means clear that in their time they did not actually contribute to its ultimate success. They were called "the all-important connecting link between the primary schools and the university." For the time they were the realization of one of the Prussian ideas, and they stimulated the development of the system of high schools in which Michigan takes so much pride. But the branches were by no means the only narrow escape that the university made.

The doors of the department of literature, science, and the arts opened in 1841, and for a time this department was the university. It was carried on much like the Eastern colleges of that day. However, either the German example or some other cause effected one departure from the American model that did not prove to be for the better. There was no president, and the executive duties were performed by four professors in succession, a year at a time. The rule was to distribute the professorships among the religious denominations of

the State. The students in attendance never reached one hundred, and after the lopping off of the branches they tended to decrease. In 1850 the medical school was opened. All in all, the inquirer searches the history of this period in vain for any large promise of future growth, influence, and usefulness.

The State Constitution of 1851 gave the university a new legal status, and eventually a new educational status. Henceforth the Regents should be elected by the people in the judicial circuits of the State.[3] The general supervision of the university and the direction and control of all expenditures from the university interest fund were placed in the hands of the Regents. The rectorial plan had proved so unsatisfactory that the Constitution positively directed the Regents to elect a president, who should be *ex-officio* a member of the board, with the privilege of speaking but not of voting, and who should preside at its meetings and be the principal executive officer of the university. It appears, therefore, that in some important respects the university is independent of the legislative and executive branches of the State government; it has a co-ordinate status within its own limits; and there can be no question that this fact has contributed materially to its strength, permanence, and dignity.

Dr. Henry P. Tappan, called from the University of the City of New York to the presidency in 1852, brought to the university the potency of the future. He was drawn to the State by his ardent sympathy with the ideas upon which its educational system was based. He gave that one of the Prussian ideas of which he was put in charge an opportunity to develop. The policy of disregarding sectarian and partisan tests in making appointments was established, thus translating into fact the promise of 1821. The dormitory system was abandoned. The field of study was broadened and enriched. A large increase in the number of students soon expressed the public approval of the new *régime*. The law school was opened in 1859, thus rounding out the plan of 1837. Dr. Tap-

[3] In 1862, by an amendment to the Constitution, the number of Regents was fixed at eight, who are elected in pairs on a State ticket to serve eight years.

pan's present successor questions whether, in the time of his administration, any other American university was administered in so broad, free, and generous a spirit as the University of Michigan. However that may be, those eleven years certainly gave the institution a place among the real seats of American learning and science.[4]

The impetus that Dr. Tappan gave the university was not lost on his retirement in 1863. It has continued to grow in all directions. Old departments have been expanded and new ones added. President Angell's administration, which will round out its quarter-centennial next year, has been marked by uninterrupted healthful growth.

With this historical sketch before us as a ground, we can rapidly fill in the characteristic features of the University of Michigan.

The first thing to be firmly grasped is the fact that we are dealing with a State university, and not with a private corporation; a university that touches the better life of the State at all points, and commands the suffrages of a numerous, influential, and growing constituency. Save the interest-bearing fund arising from the Congressional endowment, its support comes wholly from the State. The legislature of 1867 passed the first University Appropriation bill, and every succeeding legislature has in some form followed the example. In all, the State, by the way of the legislature, has given the university about two and a half million dollars. At present the institution receives the proceeds of one-sixth of a mill annually on the tax duplicate of the State. Free teaching has been the ideal from the beginning. Fees of all kinds are very low. The law

[4] This is President Angell's characterization of Dr. Tappan in his Semi-Centennial Oration:

"A man of commanding presence; of marked intellectual endowments, already proved by the authorship of books which had won for him reputation on both sides of the Atlantic; of large familiarity with the history of education; of experience as a college teacher; of broad and well defined views on university policy; of the warmest sympathy with Crary and Pierce [who had been educational leaders in the State in 1835], and the founders of this institution, in their admiration of the Prussian system; of remarkable powers of impressing others with his views, whether by public speech or by private intercourse—he took up the work here with a vigor and earnestness that speedily kindled in all hearts the hope of that brilliant success which soon crowned his labors."

prescribes that the university shall be open to all residents of Michigan without charge for tuition, and beyond that commits the subject to the discretion of the board of Regents. While differences of opinion have arisen on the question whether foreign students should come in on the same terms as Michigan students, the policy pursued has always been a very liberal one.[5] Because the professions that are affiliated with the university lead to bread-winning more directly than general studies, and perhaps for other reasons, tuition charges and other fees are generally rated much higher in law schools and medical schools than in schools of liberal learning. But this is contrary to the Michigan ideal. A discrimination is made between the two classes of students, but it is small.[6] The university draws its life-blood therefore from the State, and its liberal policy is a principal cause of its growth and prosperity.

In 1870 the Regents adopted a declaration that the right of every resident of Michigan to the enjoyment of the privileges afforded by the university must be recognized, and that no rule existed which excluded any person from the university who possessed the requisite literary and moral qualifications. This was the end of a discussion of the question of admitting women, which was by no means confined to university circles. In fact, the legislature had expressed its deliberate opinion that the high objects for which the university was organized could never be fully attained until women were admitted to its rights and privileges. In the course of this discussion, which began at least as early as 1858, the ordinary conservative arguments were urged on the one hand; while the common arguments for the higher education of women were re-enforced by the averment that a democratic State could not consistently close, or keep closed, a State university in the faces of one-half its citizens; at least so long as it made no other equal provision for them. President Haven said in 1868: "The standard of education would not be changed. The habits of study would

[5] The resident student's fees for four years, including graduation, are $120.00; the foreign student's $175.00.

[6] The resident student pays in all $140.00 in fees; the foreign student $195.00.

not be affected. The honor of the university would rather be increased than diminished." Soon after the Regents took their action, acting-President Frieze reported that the fears of the loss of reputation and caste among universities, the decline of scholarship, and the corruption of morals, which some had expressed, had passed away. A year later he reported again that the strained relations which had existed between the university and the State had been immediately eased by the action taken. Had the admission of women been permanently denied (which was indeed most unlikely, since the Regents are elected at the popular election) the university must have suffered severely. And this leads naturally to the remark that a principal reason for the prosperity of the university is, that the Regents and the faculties, while leading public sentiment within the sphere of their proper influence, have in the main kept in close touch with the people of the State. For a time there was some difficulty in adjusting the women to the university *régime*, mainly or wholly in the professional departments. Objections to the action of 1870 may still lurk in the minds of some students and professors, growing out of sentimental considerations; but no person on the Campus, or about it, of the least responsibility, would now think of dissenting from Dr. Frieze's view propounded in 1871. For the last few years the women registered in the academical faculty have fluctuated from thirty-two to thirty-seven per cent. of the whole number. The president concludes from a study of the statistics that for some time to come the proportion of women in this faculty will be about thirty-three in one hundred, and in all the faculties about twenty-one in one hundred.[1] A generation ago, the mere enunciation of a proposition to put six hundred young women on a college campus and in college halls where they would meet and mingle with three or four times that number of young men, and particularly without surveillance, would have filled conservative minds with terror. Something of the old feeling still lingers in some quarters. It is not proposed here

[1] Report to the Board of Regents for the year 1894-95.

to discuss the co-education question; but it may be said, to the credit of the students at Ann Arbor of both sexes for the last twenty-five years, that their relations have been wholly free from the scandals and even improprieties which some persons so confidently expected.

Intimately connected with the subject of State relations is the connection of the university with the public schools system. One of the Prussian ideas is three affiliated grades of public instruction supported and administered by the State. With the lopping off of the branches already mentioned, the university ceased for a time to be in organic connection with the secondary schools. Such influence as it exerted, while no doubt considerable, was wholly indirect. In 1870 acting-President Frieze discussed this subject, or rather the broader one of the relation of higher institutions to secondary schools, in the light of well-known facts. He stated that most of the instruction given in even the best colleges and universities of the land, including Michigan, was merely gymnasial instruction. He said he saw in the high schools of Michigan the potency of real gymnasia, and the possibility of raising the standard of the work done in the university. He urged the importance of co-ordinating the university and the schools. Some of the best educators of the State, he said, both within and without the nniversity, had proposed that a commission of examiners from the academical faculty should visit annually such schools as might desire it, and give certificates to those pupils who might be successful in their examinations entitling them to admission directly to the university.[8] His report for the next year announces that, in a small way, the plan had been set in motion. He expressed at the same time the opinion that this plan would stimulate the schools to attain a higher rank, would bring them to a more perfect uniformity of preparation, would elevate the university scholarship, and, in particular, would create a reciprocal interest between the schools and the university, and win for the schools a livelier interest on the part of citizens who should thus see the two grades of education in the State closely co-ordinated. This

[8] Report for 1869–70.

was the beginning of the so-called "diploma" connection between certain secondary schools and the university. It is thus described in the original announcement: "Whenever the faculty shall be satisfied that the preparatory course in any school is conducted by a sufficient number of competent instructors, and has been brought up fully to the foregoing requirements previously named, the diploma of such school, certifying that the holder has completed the preparatory course and sustained the examination in the same, shall entitle the candidate to be admitted to the university without further examination." The faculty should satisfy itself as to the quality of the school by sending a committee of its own number to examine it at recurring intervals. It will be seen, of course, that the plan finally adopted is not exactly the plan that the acting-president had recommended. The faculty examines and approves schools; he had urged that it examine and certificate students. The diploma plan has been widely copied by other institutions, and sometimes with modifications that the mother institution would be the last to approve. In the hands of the faculty that originated it, the diploma plan, while by no means free from difficulties, has worked most beneficially—to the secondary schools, to the university, and the State. It will no doubt be introduced still more widely. It is in fact nothing but an adaptation of the *Abiturienten-examen* of the German gymnasia. It secures measurably an end that the English Royal Commission on Secondary Schools has strongly urged in its recent Report, viz.: "All that it seems necessary for the local authorities to secure is a report from a competent hand upon the general condition and equipment of each school, including particularly the number and qualifications of the teaching staff." But it must be distinctly understood that the uppermost thought in the minds of the men who invented the diploma system was not the discovery of a convenient method of getting students into college. While that object was indeed in contemplation, it was subordinate to the larger thought of co-ordinating and vitalizing all parts of the State system of instruction.

The intimate connection betwen the university on the one hand, and the people and schools of the State on the other, has naturally exerted an influence in respect to studies and ideals. Still it is hard, or rather impossible, to distribute the total effect of modifying influence between public opinion and other recent educational causes. In the first part of its history, the work done was on the old-fashioned college lines. The influence of the University of Virginia has never been much felt in the Northern States, nor were President Wayland's pronounced views in respect to college education, set forth in 1842, translated into action by Brown University until 1851. Down to that time college men in the United States had not learned to conduct an institution of higher learning on modern lines. In 1851 the legislature of Michigan passed an act making it the duty of the Regents of the university to provide for a course or courses for such students as might not desire to pursue the usual college course in the literary department, embracing the ancient languages, permitting their admission without examination in such languages, and granting such certificates on the completion of their course or courses as might be deemed appropriate. Dr. Tappan was in full accord with this movement. Accordingly, the catalogue of 1852–53 announced a modern course, and in 1855 the degree of Bachelor of Science was conferred upon two students. Before this date this degree had been conferred in the United States only at the Lawrence Scientific School, and there for the first time in 1851. The new course was only the beginning of differentiation. In later years came the degree of civil engineering, which was afterward discontinued. The degrees of Bachelor of Philosophy and Bachelor of Letters were added to those of Bachelor of Arts and Bachelor of Science. In fact the degree in science has been differentiated, the particular group of studies in which the student has specialized forming the basis for the specialized scientific degree. Propositions to make one degree, or a university degree, to make two degrees, and three degrees, have found lodgment in the minds of some professors; but it is quite safe to say, whatever else may

happen, that the requirement of Greek for the ancient degree will not easily be yielded.

Elective studies first appear in 1855–56. One-third of the work in the senior year was then made elective. In 1871 all the senior studies but philosophy were put on the free list. The last and longest step in this line of progress was taken in 1878–79, when a generous system of electives was introduced. Under the existing *régime*, somewhat less than one-half of the work required for a bachelor's degree is prescribed work. In the field of electives, no limitations whatever are imposed upon the student, other than his own scholastic fitness or unfitness to carry on certain studies, as adjudged by the professors. The "university" system, which, as here carried on, permits the student who has completed one-half of the work required for his degree to choose three special lines of study and pursue them closely to the end, was duly legalized; but for some reason it has never proved to be a strong competitor of the "credit" system.

What are now called special students have played a not unimportant part in university life. Since 1852–53 the regular courses have been open to such persons as might choose to enter them, not candidates for degrees, for such length of time as they might elect, provided they were of prescribed age and could convince professors that they had attained to such proficiency as would enable them to proceed advantageously with the studies of the classes which they proposed to enter. A majority of the "specials," after spending one or more semesters at the university, have gone direct to the work of life, but a large minority have become candidates for degrees and have continued to graduation.

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[*To be concluded*]

V

THE COUNTY UNIT IN EDUCATIONAL ORGANIZATION[1]

The educational thought of our time has been chiefly directed toward the improvement of city school systems. So we hear of the great schools at Boston, Chicago, New York, Cincinnati, Philadelphia, and a score of other places; but I have yet to hear of a single county or township of rural population, the excellence of whose schools entitles them to national repute. The emphasis of our thought has been placed long and devotedly on city schools at the expense of the rural schools.

It is true that cities are the centers of highest civilization. Our human nature has made them so. Architecture, art, literature, schools, fashion, reach their highest forms when people strive with each other for display. The very contact of people civilizes them. Cities are likewise the centers of greatest iniquity. The worthless, the idle, the contentious, the wicked, gravitate toward large centers. Extremes of virtue and vice meet. The force of cities is centripetal. It attracts everything, good and bad alike. But cities do not develop individuality. There is a leveling influence about them that merges individuals into masses, and it is only occasionally that a volcanic genius breaks through the hard crust and thrusts itself above the burning level of great city life. The highest types of individuality, the strong and independent men of our nation, have been born and bred in village or rural homes, away from the turmoil of city life, in quiet and serious communion with nature, in her grand and ennobling forms. It is out of the rural homes that the great men of our country

[1] An Address delivered before the Department of Superintendence of the National Educational Association at Jacksonville, Fla., February 18, 1896.

have come. Genius abhors the palace and the crowded cities and the cradles of luxury, and courts the cabins and the open fields and the simple but stern homes of the poor.

We need skilled labor in the fields as well as in the city. We need intelligent and scientific management of a farm, as well as of a great factory. We need business methods here as well as in the great commercial houses of the city. We need economy of effort and conservation of force and adaptation of invention and discovery here, if we need it anywhere. And we need culture and refinement among the country people. Music, painting, books, and all the evidences of a higher kind of life are as proper on the farms as in the cities. The more highly educated the people of the rural districts are, the more capable they will be of taking advantage of the improvement in machinery, of economizing time and labor in producing raw material, and the more time they will have to devote to culture and the higher arts of civilization. They will accomplish as much as now in far less time, and will live more comfortably and more happily.

That farm life is behind city life in development is due in some part to the isolation of the rural population. Men live too far apart and see each other too seldom to exert a refining influence over each other. In other part, it is due to the attention that has been given to educating the people of the city.

It is quite time that we change the emphasis of our study, turn aside from the contemplation of the excellences of the city schools, and consider the necessities of the rural schools. The wisest policy is to frame some educational scheme that will keep the people in the country, that will stop the exodus from the farms, that will make the rural population content, that will make them enlightened and prosperous.

I believe very firmly that the county or township is the proper unit of educational organization. If one system of schools can be made to extend over a whole county, including the city and villages, the organization will be upon the basis of territory. By this means the entire country can after a while be brought under uniform organization. So long as the

organization is by cities, we merely organize by locality, which can never be uniform or entire. It will always remain a one-sided development. A proper policy is to induce the people hereafter to organize by area, rather than by spots. The effect of this will be to give to the rural child the same school advantages as to the city child, and there is every reason in equity and good sense why these advantages should be the same.

I come from an illustration of this kind of organization, and it may not be amiss to tell something of the schools of Richmond County, Georgia, in which county is situated the thriving city of Augusta. Here, for the past twenty-five years, has been in operation, what is known as the county system.

One board of education, composed of representatives elected by the people for a term of three years, one-third of the membership expiring every year, has charge of the entire school interests of the city of Augusta and of the County of Richmond. This Board of Education has the unique power of levying a school tax directly upon the people of the county, without revision by any other authority, and without any limit as to rate or amount. The school tax is levied and collected as a uniform rate upon all property of the county, whether it is in the city or out of it. This forms the general school fund of the county, supplemented by the State appropriation.

When it comes to the distribution of this fund no regard is paid to the amount raised by any ward of the city or any district of the county, but the fund is distributed according to the necessities of each ward and district, determined by the number of children to be educated. The school fund of the whole county is raised by a tax on all the property of the county, and is distributed upon the basis of the school population of each community. Thus it happens that a community rich in naught else but children will get a flourishing school paid for by their wealthy but less fortunate neighbors.

As a matter of fact, a large part of the money paid by the city is annually spent in the rural districts, for the city has nine-tenths of the taxable property, but only three-fourths of

the school population. So it happens that the rural schools pay one-tenth of the school tax and receive the benefit of one-fourth of it. Augusta has spent in the past twenty years the sum of two hundred thousand dollars, in building schoolhouses and paying school-teachers for the children who live in the country districts around her. Augusta has shown her faith in the proposition that every city needs to be environed by an intelligent, industrious, and contented population.

When it comes to teachers, the same qualifications are demanded for rural schools as for city schools. Upon the regular examination terms, and upon the issuing of licenses to teach, an applicant does not know whether he will teach in the city or out of it, and to many it is a matter of indifference. And I know whereof I speak when I say that there are young women graduates of normal colleges doing high-grade work in country schools ten miles beyond the limits of the city, and doing it happily and cheerfully. We believe firmly in the further proposition that a country school is entitled to as good a teacher as a city school, and that those who live in the fields are as deserving of education as those who dwell beside the asphalt. Carlyle must have had a country child in his mind when he said "this I consider a great tragedy, that one soul should remain in ignorance that had capacity for higher things."

The teachers are treated as nearly alike as can be. City and country teachers are paid about the same salaries. They get it at the end of every month and on the same day. The certainty and the regularity of a fixed compensation create a sense of security, safety, and comfort for a teacher, and accordingly increases his efficiency. No teacher can do his best work when he works at starvation rates, is paid once every three or four months, and often in scrip that he must discount. There is much philosophy and also economy in the maxim that advises us to pay a public servant well and watch him closely. So we draw no distinction of locality. First-class work is worth as much twenty miles from town as it is in the heart of the city.

The schools of the county all run nine calendar months. They all begin at the same time and close at the same time. During the last year every child of the county, regardless of where he lived, was offered nine months of actual tuition.

So far as schoolhouses are concerned, these are located in rural districts, so as to be on an average of four miles apart. No child is out of walking distance of a school, open nine months in the year and taught by a good teacher. These houses are owned by the board of education and cost from three hundred to twenty-five hundred dollars each, according to size and equipment.

One superintendent has charge of all the teachers in the county. The same degree of efficiency that should attend the supervision of city schools is likewise extended to the country schools. One expert for all is the theory, and, so far as human effort can avail, it is carried out in practice. The same course of study is prescribed for the pupils, and the same course of professional reading is required of the teachers. The teachers of the city schools meet for instruction once a week, the teachers of the county meet once a month, and in addition have a two months institute, in the summer months.

This, in brief, is the outline of the plan of organization of the schools of which I assumed charge thirteen years ago. That it has its defects of management and its minor faults I am prepared to admit. These I need not enumerate at this time. Suffice it to say that no one knows what they are and that they are, more surely than I do. What institution devised and controlled by an imperfect humanity is without the faults that are incident to us as men? That our system is projected upon the proper theory, for all our population, and for all the boys and girls under our tuition, I firmly believe.

There are two other systems in Georgia organized upon a similar plan, one for Savannah and the county of Chatham and the other for Macon and the county of Bibb.

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VI

EDUCATIONAL MUSEUMS AND LIBRARIES OF EUROPE

Probably the first formulated statement of the need and character of a distinctively educational museum appeared in a monograph[1] by School Inspector General Jullien of France in 1817. Jullien was indoctrinated with the educational theories of Pestalozzi and desirous of their adoption in his own country. He maintained that an important step in education would be taken if there could be opened at Paris a permanent exhibit of the teaching appliances used by Pestalozzi, together with sets of those in use in other countries, and a library containing the writings of standard pedagogical authors. Jullien's well-directed suggestions, however, seem to have borne no immediate fruit.

From the beginning of the present century, and in connection with various industrial and trades' expositions in Europe, there had been exhibits of pupils' work and teaching appliances; but the purpose was the temporary display of local conditions rather than a permanent representation of educational progress. Perhaps the first permanent exhibit of teaching appliances was that opened at Stuttgart in 1851. It was in no sense a special educational museum, but merely one section of the Wurtemburg industrial museum.

What will surprise most readers is the fact that the first distinctively educational museum was organized in America—the Educational Museum at Toronto, Canada, founded in 1853. Four years later, 1857, as an outgrowth of the educational congress and exhibit held at St. Maryn's Hall, London, the Educational Division of the South Kensington Museum was

[1] Jullien, *Esquisse et vue préliminaire d'un ouvrage sur l'éducation comparée* (Paris; 1817).

formed. The next one organized was at St. Petersburg in 1864. A year later one was organized at Leipzig, which, after six years of struggle, was merged into the Comenius-Stiftung. The Bureau of Education at Washington was established in 1867. Three years later the national teachers' association of Holland formed an educational museum at Amsterdam. During the decade from 1870 to 1880, no less than a dozen similar institutions were organized in Europe.

Some of these museums, as, for instance, at St. Petersburg, Paris, Brussels, and London (Educational Division of the South Kensington Museum), have been established and are wholly maintained by the national governments, and are considered an integral part of the general system of education. Several—at Munich, Budapest, and Neuchâtel—are maintained by state or cantonal governments. Berlin (the city museum), Hamburg, Hanover, and Lisbon are the creations of city governments. Others, as Amsterdam, Berlin (the German museum), Hildesheim, Jena, Brunswick, Stockholm, and London (Teachers' Guild) have been organized and are supported by teachers' associations. A number of these educational museums have been started as memorials to great educators, as that in Leipzig to Comenius, that in Zürich to Pestalozzi, and that in Fribourg to Girard.

There are in all thirty-five educational museums in Europe in active operation and two—Vienna and Rome—that are temporarily closed. A few have only the school museum, and two or three only the pedagogical library. The general aim of all is to bring to the attention of the teachers of their own city, state, or country, the best methods and aids in teaching, the steps of educational progress, the writings of great educators, and the condition of schools and education in the different countries of the world. Several of the most important educational museums described in this article were visited by the writer. For accounts of the others he has relied upon the excellent monograph[1] by Julius Beeger, and the reports,

[1] Beeger, *Die Pädagogischen Bibliotheken, Schulmuseen und ständigen Lehrmittelausstellungen der Welt* (Leipzig, 1892).

catalogues, and personal information furnished him by the directors of these different institutions.

England—There are two educational museums in England—the Educational Division of the South Kensington Museum and the Teachers' Guild of Great Britain and Ireland. The former, as already noted, grew out of the educational exhibit and congress held in London in 1854, although it was not formally opened until 1857. Its object, as set forth in a preliminary announcement, was to "aid all classes of the public, and especially those engaged in teaching, by bringing together all that is new and worthy of attention relating to education, both in its primary and secondary branches, whether of home or foreign production."

Although organized and controlled by the state, the growth of the museum was due largely to the assistance given by the producers of educational books and apparatus. Each object was labeled with its name and use, the retail price, and the name and address of the donor or exhibitor. The school exhibit had eight departments: (1) school furniture and fittings, models of buildings, etc.; (2) cabinets and apparatus for object lessons, toys, doll houses, etc.; (3) drawing models and materials; (4) musical instruments, especially such as illustrate acoustics; (5) collections illustrating household and social economy; (6) apparatus for elementary geography and astronomy; (7) appliances for teaching the blind; (8) hygiene and means of physical training. In 1879 the museum was called upon to vacate the rooms occupied by the school furniture and the non-scientific apparatus, and these were crowded into a wooden building and unsuitable corridors. Nine years later these portions of the museum were dispersed —the loan collections returned to the owners; and such as belonged to the museum packed and stored. In the official report for that year, it is stated that want of space rendered this necessary.

The library, however, has continued to grow from the first. Its aim has been to afford teachers and others interested in education opportunities for examining and comparing the

various publications used in schools, together with such books as bear on the history and progress of education at home and abroad. Many of the books have been gifts; and one notes a disproportion which is inevitable in a collection so largely made up of donations.

In its original plan, the library included fourteen departments: (1) English language and literature; (2) classical language and literature; (3) modern language and literature; (4) biography and history; (5) theology and church history; (6) works on pedagogy, reports, examination papers, etc.; (7) political, domestic, and social economy; (8) drawing and writing; (9) music; (10) mathematics; (11) geography and astronomy; (12) geology and mineralogy; (13) botany and general natural history; (14) chemistry, general physics, and mechanics. Since 1883 no books have been added to the first five departments. The present aim is to make it strictly an education and science library. The library numbers 77,000 volumes, 10,500 of which are works on pedagogy, reports, examination papers, etc. The first catalogue was printed in 1857, and nine subsequent additions have appeared. A new catalogue, containing all the books on education, was published in 1893.

The Teachers' Guild of Great Britain and Ireland was organize in 1885, but it succeeded an earlier organization—the Educational Society. Robert Hebert Quick, so well known in this country and the sense of whose loss is so fresh upon us, was one of the chief promoters of the Guild. Its aims are threefold: (1) to form a society which shall be thoroughly representative of all grades of teachers, and which shall be able to speak with knowledge and authority on all matters of education; (2) to obtain for the whole body of teachers the status of a learned profession; (3) to enable teachers, by union and co-operation, to make better provision for sickness and old age, and by the same means to do all such other lawful things as may conduce to their own welfare and the benefit of the public.

The central office of the Teachers' Guild is in London (74 Gower Street), with thirty branches in different parts of Great Britain and Ireland and the English possessions in Asia, Africa,

and Australia. The scheme for the school museum includes (1) a collection of school documents (curricula, time-tables, syllabuses of lessons, examination papers, etc.); (2) school class books of all kinds; (3) apparatus for history teaching; (4) apparatus for geography teaching; (5) classical and antiquarian section (models of ancient dress, plans of cities, temples, battlefields, etc); (6) school plant and apparatus; (7) anthropometry; (8) music and drawing. Only a beginning has yet been made in the museum.

The library of the Guild aims to supply teachers with the books necessary for their professional training. So far it numbers but six thousand volumes, twenty-seven hundred of which are strictly pedagogical. Nine hundred of these were presented to the Guild by Mrs. Quick after the death of her husband, and two hundred of the rarer books used by Mr. Quick in the preparation of his *Educational reformers* she has loaned to the library. One hundred volumes from the library of the late Mr. W. H. Widgery, one of the early promoters of the Guild, have been presented as a Widgery memorial. The library of the Teachers' Guild is the best small collection of pedagogical books that has come to the writer's attention in his European studies; and connected with no educational museum or library has he found a more zealous band of educational workers—men like Watson, Storr, Russell, Garrod, and Mitchell, most of whom are known in America through their writings.

France—The Musée Pédagogique at Paris is the creation of the French government. It was organized in 1879—just after the great exposition—largely through the efforts of M. Ferdinand Buisson, the present director of elementary instruction. It occupies a large three-story building of thirty rooms in the Latin quarter of the city (41 Rue Gay-Lussac) and is unquestionably the best equipped and best supported educational museum in the world. The most considerable accessions to the museum have come through the expositions of 1878 and 1889, although the government has spared no expense to make it first-class in every department.

Manual training in all its varied forms of expression is fully represented. The physical and chemical laboratories are most complete. There is a splendid collection of objects in clay, wax, and glass, representing every department of natural history. In the hall filled with beautiful marbles, casts, photographs, and other reproductions to illustrate art education, there is such an artistic representation of masterpieces as only France could bring together. Perhaps there is nowhere a fuller collection of the appliances to be used in the teaching of geography—globes, maps, charts, pictures, diagrams—than here. Schoolhouses in miniature, school furniture, heating and ventilating appliances, plans and photographs of school buildings, and all the conceivable illustrative aids to be used in teaching, bring the number of objects up to something over six thousand and fill a dozen rooms. But with this superb collection—costing vast sums of money and including about everything that is best in the way of teaching appliances—there is a want of organization and a failure to keep the objects in proper condition which render it less helpful to the student of education than the much smaller, but better organized and better kept, museum at Brussels.

The library of the Musée Pédagogique numbers fifty thousand volumes, and these have been secured almost entirely by purchase. The result is a much better selection than one finds in the large pedagogical libraries at Leipzig, Zürich, and London, where accessions have been made so largely through gifts. Every department of education—the history, theory, practice, method, growth of institutions and school systems, treatment of defectives—is here represented by the best books in the leading modern languages. The periodical, reference, and reading rooms are admirably equipped for the accommodation of students and readers. One finds here every educational journal of worth—in whatever language—that is printed in the world to-day. The library occupies sixteen rooms.

Through the circulating department of the library, students and teachers are reached in every part of the republic. All such books are forwarded and returned, postage free, as

government matter. Books may be kept for two months. The circulating department of the library has three sections: (1) letters, including works on the French language and literature, history, geography, and political economy; (2) science, including mathematics, physics, chemistry, natural history, agriculture, horticulture, and hygiene; (3) pedagogy, including general works on education, history of pedagogy, philosophy, psychology, ethics, civics, school legislation, and the theory, practice, and history of the fine arts.

Connected with the Musée Pédagogique are several conferences on different educational topics. One of these is the Franco-English Guild, under the direction of Mlle. Williams, professor of English language and literature in the École Normale at Fouteney-aux-Roses, and devoted to the interests of modern languages. It has its own special library, lectures, conferences, and classes, and publishes a journal in English for the French teachers of this language.

Much of the best modern French literature on education has emanated from the Musée Pédagogique. Besides the monthly journal, *Revue Pédagogique*, devoted to elementary education, which has been printed since 1882, and the monographs[3] which it published in 1889, it has been publishing a series of memoirs[4] since 1884 on every phase of educational activity, more than 125 of which have already appeared. The printed catalogue[5] of the library, prepared by Profesor Bonet-Maury of the University of Paris, is the best bibliography of education ever published in any language. It should be noted, in passing, that probably no professional library anywhere is more used than this at Paris. And its readers include not only Frenchmen, but also Englishmen, Russians, Americans, Italians, Bulgarians, Belgians, and Spaniards. The French government, with characteristic generosity, freely admits the pedagogues of all nationalities to its use; and those who know

[3] *Monographies pédagogiques publiées à l'occasion de l'Exposition Universelle de* 1889, 6 vols. (Paris, 1889).

[4] *Mémoires et documents scolaires publiés par le Musée Pédagogique.*

[5] Bonet-Maury, *Catalogue des ouvrages et documents*, 3 Tome (Paris, 1891).

it best, pay it highest tribute. A German educator, in describing it, remarked: "There is only one such collection of pedagogical books in the world."

Germany—But Germany is the country of educational museums. It has in all seventeen, or nearly half the number in all Europe. With a few exceptions, however, these are small exhibits of school work and teaching appliances or inconsiderable pedagogical libraries. The pedagogical library (Pädagogische Centralbibliothek) at Leipzig, and formerly known as the Comenius-Stiftung, is a notable exception. To except a small exhibit which it inherited from an earlier organization, it dates its beginning from 1871—the two hundredth anniversary of the death of Comenius. Its conception and remarkable growth have been almost entirely due to the efforts of one man—Julius Beeger, an enthusiastic student of the writings of Comenius, and until lately the director of the library. He began by issuing appeals to teachers, pastors, and friends of education generally; soliciting gifts in books and money. At the end of the first year the library numbered 2642 volumes, all but one of which had been acquired as gifts. At the end of ten years the library numbered 30,919 volumes, only 4511 of which had been bought directly out of the library's funds. It now numbers 66,604 volumes—probably the largest collection of pedagogical books in the world, although in no sense so select a library as the one at Paris.

The first volume of the catalogue[6] has been printed, and other volumes are to follow. The library is subdivided into fifty-six departments, only a few of which can here be noted: Encyclopedias of pedagogy, 12 different works; collections of standard pedagogical writers, 72; number of different educational journals—in German, 296; in Danish and Swedish, 4; in English, 27; in French, 8; in Hollandish, 6; in Italian, 6; in Portuguese and Spanish, 5; in Slavic, 6; sources of the history of pedagogy, 110 volumes; general works on the history of pedagogy, 29; history of distinct periods in educa-

[6] Beeger, *Katalog der Pädagogischen Centralbibliothek (Comenius Stiftung), Zu Leipzig*, 1 Bande, II. Auflage (Leipzig, 1892).

tion, 150; histories of education in different countries, 339; educational biographies, 472; histories of individual educational institutions, 3044; systematic pedagogy, 106; physical education, 205, etc. It covers in fact every possible department of educational thought, and is especially strong in the literature relating to the common (*Bürger*) schools of Germany.

Students of education are always welcomed and are given every possible assistance by the library management. It is under the control of the Leipzig teachers' association, and is sustained in part by the association and in part by appropriations from the city of Leipzig and the kingdom of Saxony. The library publishes a weekly journal for teachers, the *Leipziger Lehrerzeitung*.

Berlin has two educational museums—the city (Städtische Schulmuseum) and the German (Deutsche Schulmuseum) school museums. The former was organized in 1875, and is under the control of the city authorities and receives an annual appropriation of about $1000. It has a considerable collection of illustrative apparatus and a library of 14,500 volumes. The German school museum was organized in 1876 by the Berlin teachers' association. It has a library of 16,000 volumes, and has aimed to make complete collections of the writings by and about Pestalozzi, Diesterweg, and Herbart.

The Thuringen school museum was opened at Jena in 1889. It is controlled by the Thuringen teachers' association, but its growth has been largely due to the enterprise of Ernst Piltz, the director. The collection of school furniture, teaching appliances, maps, charts, and text-books is good, although the library of strictly pedagogical books is not large. There is, however, at Jena, in connection with Professor Rein's pedagogical seminary, a professional library of about a thousand volumes.

Bavaria has two educational museums—one at Donauwörth, organized in 1875, and under the control of the Bavarian Society for Catholic Education, with a library of 40,000 volumes, and the other founded at Munich the same year and controlled by the government. The latter has a permanent

school exhibit of some importance and a library largely composed of text-books.

The Mecklenburg school museum, located at Rostock, was organized 1887, and has a library of 2246 volumes. The teachers' association of the Province of Saxony organized a permanent school exhibit at Magdeburg in 1881. The educational museums at Kiel and Königsberg were both organized by local teachers' associations; the former in 1890, and the latter in 1879. That at Königsberg has a library of 5000 volumes. The educational library at Hanover was organized by the city; and that at Hildesheim in 1889 by the local teachers and has a library of 1000 volumes. At Hamburg, since 1891, the local government has set apart the educational books in the city library in a room especially fitted up for the use of the teachers. At Stuttgart, as before noted, the educational museum is one section of a permanent industrial exhibit. In addition, there are in Germany small school museums at Augsburg, Brunswick, and Dresden.

Russia—The largest exhibit made by any educational museum at the Chicago exposition, with the possible exception of the Bureau of Education of this country, was that of Russia. Although under the administration of the department of war, the Musée Pédagogique of Russia is conducted in the interests of general education. It was organized as early as 1864, at which time the Russian government bought of Germany, France, England, and Italy large collections of school apparatus which were displayed, in a building set aside for an educational museum, at St. Petersburg. At the time no suitable apparatus was manufactured in Russia. It was soon discovered, however, that the imported material was too expensive and not entirely suited for general use. It was accordingly decided that the museum should manufacture certain pieces of school apparatus at government expense and sell the same to the schools at nominal cost. The movement succeeded even better than was anticipated, and after a short time cheap workshops for the manufacture of physical apparatus were organized at various centers. The museum has con-

tinued to make collections of the best teaching appliances used at home and abroad, until at the present time it numbers 16,500 pieces—probably the largest in the world.

The library numbers 15,000 volumes besides the publication by the museum of certain text-books for the use of the young—165,000 copies of one text for reading and writing having been printed. During the winter months, when the library is most used, from 70,000 to 100,000 books are drawn. The museum edits a pedagogical journal, and at different times has printed courses of study and suggestions to teachers. It also provides schools with collections for scientific instruction, and gives them the temporary use of magic lanterns, slides, etc. During the past twenty-five years, it has provided 1221 public lectures, 1182 readings for the people, 190 musical concerts, and provided the apparatus for 163,187 lessons. The museum's aim, as formulated by the director, is (1) to be useful to the educated and uneducated classes of the metropolis, as well as to all who may seek its counsels and assistance; (2) to look upon the collection of school apparatus not as a final aim, but as a means of present improvement; (3) to keep its operations not only open to the government, but also to public control.

The museum organizes special conferences for the discussion of educational questions; and all persons having the certificate to teach in middle or higher schools, teachers of the Holy Scripture, medical men, and persons connected with the administration of the schools are eligible to active membership in these conferences. At the present time there are eight such conferences organized in connection with the museum, as follows: (1) general pedagogical section; (2) section for the study of the Russian language and literature; (3) mathematics; (4) physics, chemistry, and cosmography; (5) geography and natural history; (6) foreign languages (French and German); (7) parents' circle, including teachers, physicians, and parents interested in the physical and mental development of young children; (8) section for the discussion of questions relating to the delivery of public lectures.

The operations of the Russian educational museum have twice been exhibited in this country by large and creditable displays—at Philadelphia in 1876, and again at Chicago in 1893. It had similar exhibits at Paris in 1878 and 1889 and at Brussels in 1880. Special exhibits were also made in connection with the international geographical congress at Paris in 1875 and the international hygienic congress at Brussels in 1876. It exhibited its workings to the Russian people at St. Petersburg in 1870, in connection with the manufacturers' exposition, with a display of foreign school appliances and its own reproduction of the same. Two years later it participated in the polytechnic exhibition at Moscow; and in 1890 it organized and conducted at St. Petersburg the first Russian exhibition of children's toys, games, and occupations.

Switzerland—The Swiss people have always been interested in education; and this interest is manifested not only in the character of their elementary schools and higher institutions of learning, but also in the establishment and maintenance of other educational agencies, including school museums and pedagogical libraries. There are four well-organized educational museums in Switzerland. The most important of these is the Pestalozzianum at Zürich, organized 1875. The others are at Fribourg, Berne, and Neuchâtel. The Pestalozzianum has four departments: (1) public collections, including apparatus illustrating the present workings of the Swiss schools, an exhibit illustrating educational practices in other countries, a Pestalozzi memorial room, archives for the history and statistics of education in Switzerland, and a library of pedagogical literature; (2) a bureau which shall organize educational conferences; (3) public lectures; (4) publication of educational literature.

The museum contains very complete lines of work done in the Swiss schools, samples of teaching apparatus used, as well as appliances illustrative of the teaching aids in foreign countries. The exhibit is especially complete in the subjects of drawing and manual training. One room—the holy of holies—has been set aside as a memorial to Pestalozzi. Besides 1000

Pestalozzian manuscripts and 1350 books and pamphlets relating to the great Swiss educator, it has the cradle in which he was rocked, and other personal mementoes, together with a fine collection of photographs of the different scenes of his labors, and a full series of his portraits in paintings and engravings.

The library contains 17,100 volumes, and the catalogue[1] just printed shows a wide range of educational thought. From the first it has been under the direction of Professor Hunziker of the University of Zürich; and although aiming primarily to promote the interests of the elementary schools, it has always been an organic part of the university instruction in pedagogy. Since 1880, it has published the *Pestalozziblätter*, a high-grade monthly journal devoted to the interests of education. The Pestalozzianum derives its revenues from a number of sources—the Pestalozzi Society, the city and canton of Zürich, and the Swiss government.

The Musée Pédagogique at Fribourg was organized in 1884, chiefly through the efforts of M. Léon Genoud, who represented the Swiss government at the educational congresses held at Chicago in 1893. The museum has four departments: (1) collections of teaching appliances; (2) pedagogical library; (3) works by Père Girard, and books relating to him; (4) documents relating to the history of education, school legislation, and statistics. The museum contains 9733 objects, and the library 4643 volumes. It is especially strong on educational works in the French and German languages. It publishes a journal for teachers—the *Bulletin Pédagogique*.

The educational museum (Sweizerische permanante Schulausstellung) at Berne was founded 1879, although there had been before that date a permanent school exhibit in connection with the industrial exposition, on the plan of the one at Stuttgart. It is managed by a teachers' association, and the city and canton of Berne contribute toward its support. It includes (1) appliances illustrating Swiss education; (2) models of schoolhouses, furniture, etc., used in foreign countries; (3) objects

[1] Hunziker, *Katalog der Bibliothek des Pestalozzianums* (Zürich, 1894).

and materials illustrating the history of education; and (4) a pedagogical library. The museum has 1506 pieces, and the library 8000 volumes. A monthly journal, the *Pionier*, is published by the museum management.

In 1887 the educational museum (l'Exposition Scolaire Permanente) of Neuchâtel was formed by the educational department of the canton government. It aims to illustrate by pupils' work, text-books, and teaching appliances the subjects taught in the elementary schools.

Austria-Hungary—When preparations were being made for the great international exposition of 1873 at Vienna, it was decided to organize a permanent educational museum (Permanente Lehrmittel Ausstellung). A government regulation provided that all new and valuable teaching appliances intended for elementary schools should be procured and exhibited here. The museum was well equipped by the accessions which came to it through the exposition. It continued to grow, in spite of insufficient funds, until it included 19,000 objects. But financial difficulties finally compelled it to close. How long it will remain closed, no one with whom the writer communicated seemed to know; but it does not seem probable that a great city like Vienna will be long without this educational institution. A recent monograph[8] by Professor Stejskal shows that the Austrian schoolmen are agitating its reopening with considerable vigor.

At Bozen a permanent school exhibit was opened in 1889, and the same year the teachers' association of Tyrol organized an educational museum at Innsbruck. The educational museum at Graz was opened in 1881. It occupies seven rooms and has both a museum and library. The former includes 6840 objects, and the latter contains 2000 volumes.

Hungary has shown a larger interest in her educational museum than Austria. From the first it has been a state institution and has received liberal support. The Hungarian educational museum (Orszagos tanszer-múseum fö-felügyelösége)

[8] Stejskal, *Die Errichtung eines k. k., österreichischen Museums für Erziehung und Unterricht* (Wien, 1894).

was opened at Budapest in 1877. It has fifteen sections, including plans and models of schoolhouses and furniture, kindergarten supplies, apparatus for teaching the blind, outfits for physical and chemical laboratories, globes, tellurians, maps, and other geographical appliances, musical instruments, drawing models and casts, and sets of tools used in the manual-training schools. It numbers about 5000 pieces, and the library contains 1200 volumes. A number of educational conferences are organized in connection with the museum.

Belgium—The educational museum (Musée Scolaire National) at Brussels is conceded by all familiar with such institutions to be one of the best in the world—ranking in size and excellence with St. Petersburg and Paris. The writer found the museum portion more helpful than the one at Paris, because of superior organization and greater care of the articles displayed. The library bears no comparison with that at Paris, or a half dozen others in Europe. This museum was the outgrowth of the international exposition held at Brussels in 1880, one of the exposition buildings (Palais du Cinquantenaire) having been set aside for its use. It derives its support wholly from the government, and this from the first has been liberal—$3000 to $4000 a year.

In arrangement and display of work, the museum at Brussels is a model. It has nineteen departments, and an excellent catalogue[9] aids materially in the study of each. The first section is devoted to legislation, organization, and statistics of the schools of Belgium. By means of charts and diagrams, the visitor gets at the outset a schematic view of the school system of the country, and the relation which the different types of school bears to the general system of education. Section two is devoted to the earliest period of school life—helps for the use of mothers—and a fully equipped kindergarten. Section three begins with the primary school; and here again is a model room entirely fitted up with furniture, pictures, books, charts, and all the auxiliaries of such a school.

[9] Germain, *Musée scholaire national: Catalogue provisoire des collections* (Bruxelles, 1892).

Section four is devoted to the subject of agriculture as taught in the primary, secondary, and normal schools. Methods of teaching the blind occupy the fifth section. Domestic economy and housewifery, with all the appurtenances of a laundry and cooking school, form the sixth section.

Manual training, as taught in the elementary and normal schools, is the basis of the seventh section. The courses of study, drawings, models, and specimens of work done by the Belgian children are exhibited, together with similar lines of work from Sweden, France, and Germany. The eighth section is devoted to geography. It contains 347 pieces, including text-books, wall and relief maps, globes, atlases, products, pictures, photographs, and models. It contains not only the geographical aids used in the schools of Belgium, but also good collections in use in other countries, including the United States. The ninth section is devoted to the geography of the Congo—a remarkably interesting collection, illustrating the geography of that part of Africa by means of books of travel, maps, pictures, photographs, natural products, implements used by the natives, etc. The tenth section is devoted to the teaching of history and the Bible: the eleventh to gymnastics and physical training; the twelfth to the organization of normal schools; the thirteenth to the teaching of the natural and physical sciences; the fourteenth to drawing and historical art; the fifteenth to children's societies, savings banks, and the effects of alcohol; the sixteenth to school organizations, supervision, and management; the seventeenth to school hygiene; the eighteenth to a temporary display of the work done by the pupils in the elementary and normal schools; and the nineteenth section is the pedagogical library. The museum contains more than 5000 different objects, and the library has 6500 books and 3000 pamphlets and reports.

Sweden—An educational library (Pedagogiska Biblioteket) was opened at Stockholm in 1885 by the Swedish teachers' association. It began with 2855 volumes, not including journals, reports, and catalogues, and now numbers more than 13,000 volumes. According to the first volume of the cata-

logue,[10] the library is classified as follows: (1) journals, reports, and proceedings; (2) encyclopedias and collections of standard educational writings; (3) education and instruction in general; (4) methods of teaching special subjects—religion, history, geography, language, manual training, etc.; (5) university education; (6) school hygiene and architecture; (7) history of education; (8) school systems in other countries. The library is open to the free use of teachers and school officers, as well as to writers of text-books and pedagogical treatises. It is supported by a teachers' association, and aided by appropriations from the school board of Stockholm and the department of public instruction for Sweden.

Spain—The educational museum (Museo Pedagógico) of Spain was founded at Madrid in 1882, and intended rather for the education of teachers than for the investigations of scholars. It has a good collection of teaching appliances, and is most used by the normal-school students. As in France and Belgium, one notes special collections to illustrate the teaching of historical art. Regular courses of lectures are organized by the museum for the normal-school students and the teachers in the vicinity of Madrid. Like the national museums in France and the United States, the Spanish organization prints many pedagogical documents which are distributed to the teachers of the country. The printed catalogue[11] shows that the library contains several thousand well-selected pedagogical books.

Italy—The Italian educational museum (Museo d'Instruzzione e d'Educazione) was established at Rome in 1874, during the ministry of Sgr. Bonghi, on the plan of the museum at Vienna. It enjoyed great prosperity during its early history, but has lately been compelled to close for want of financial support.

Holland—The Netherlandish educational museum was founded at Amsterdam in 1870 by a national association of teachers. The museum contains school books, plans of school-

[10] Lagerstedt, *Katalog öfver Pedagogiska Biblioteket* (Stockholm, 1891).

[11] Cossio, *Catálogo general del Museo Pedagógico* (Madrid, 1889).

houses, specimens of furniture and apparatus, portraits of distinguished educators, and work from pupils of the intermediate schools. The library includes works on general pedagogy, the history of education, methodology, school systems of Holland, Austria, France, Great Britain, United States, Belgium, Saxony, and Switzerland, besides many educational journals and pamphlets.

Denmark and Portugal—Of the Danish educational museum at Copenhagen, the writer was unable to obtain any official information. Through a private correspondent there, however, he learned that its chief characteristic was its inactivity. The Portuguese educational museum (Museu Pedagogico Municipal) was opened at Lisbon in 1882. It is maintained by the city government; but the writer failed to receive replies to his letters of inquiry regarding its development and present workings.

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VII

DISCUSSIONS

INTEREST AND THE TRANSCENDENTAL WILL

Dr. Frank M. McMurry, in his article, "Interest: some objections to it," published in the January (1896) EDUCATIONAL REVIEW, dismisses the objection to the doctrine of Interest founded on its relation to the Herbartian theory of the origin of the will, (1) with the statement "that the Herbartians, while greatly interested in the discussion of the transcendental will, regard the problem as belonging to metaphysics rather than to pedagogy," and (2) by giving a definition to transcendental will which is not accepted by those who attack the doctrine of Interest; and by inferring that such a will is incapable of education.

Such a dismissal will not satisfy those who, like the writer, believe in the transcendental will, as defined by Dr. Harris, and who have a profound belief that an educational doctrine founded on a false psychology must reveal itself in practice as radically defective. We are disturbed by the fact that its opponents claim that Interest is vitally connected with a theory of the origin of the will which we conceive to be false, but the truth of which Herbartians, who expound and defend the doctrine of Interest, seem to take for granted.

This vital relation of Interest to the will is its most assailable point, and it is just here that the defense is weakest. I accept the definition of the transcendental will as "a will which can originate modifications in its environment, and therefore set aside to a greater or less extent the stream of causation in which it finds itself," and propose to justify the acceptance of the principle of Interest.

The majority of our actions as adults are directed by necessity, not by interest. I am writing this paper because I am interested in the subject, but I do my daily work because I must. On that depends my livelihood and that of my family. To the extent to which I am interested in my daily vocation, I am impelled by Interest, and the necessity, while objection-

ably present in my life, is not felt as a mental force influencing my will. Who shall say that my life does not move with greater freedom, and that my will is not stronger and more definite in action because I have chosen a vocation in which I am interested, instead of being driven by necessity to one which I dislike?

Place a child in the midst of surroundings which are grossly immoral, and his will is powerless to originate modifications in his environment that shall set aside the streams of causation in which he finds himself. Place a child whose parents have been vicious and immoral in a pure environment and under wholesome influences, and his will may be strong enough to originate such modifications in his hereditary tendencies as will save him. When a child studies a subject because of the inherent interest it possesses for him, his will correctly adjusts the organs of sense for observation. On the contrary, when he is set to a task he dislikes (not having a competence of motives, such as duty, or the necessity of labor, or the formation of right habits), he neglects his work; *i. e.*, his will makes no effort to originate modifications, etc.

In other words, to arrange a course of study independently of the child's interest is to deprive him of the opportunity to exercise his "transcendental will." To observe the principle of Interest is to afford opportunities for the child constantly to exercise, and thus develop his "transcendental will."

Further, when we study a subject in which we are not interested, we study it superficially; but when a subject in which we are interested engages our attention, we find unexpected difficulty in that deeper study which we give it. New and hard problems arise, which tax our will and strengthen it as it urges us on to a complete mastery of the subject of study. So, in a less degree, is it with the child. The contention is then that Interest can be defended on the basis of the transcendental will; that it affords that opportunity for its activity and development which is lacking where there is no inherent Interest in the study; that, finally, Interest leads the student into that more intensive study where he meets difficulties which require a strong exercise of the will to overcome, and this power is exercised because of the strong interest already aroused.

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VIII

REVIEWS

A course of study for the eight grades of the common school, including a handbook of practical suggestions to teachers—By CHARLES A. MCMURRY, Ph. D. Bloomington, Ill.: Public-school Publishing Company, 1895. 152 p. 50 cents.

Dr. McMurry publishes the course of study which he has worked out, with the aid of some other teachers, for the training department of the Normal School at Normal, Ill. He is one of the leading exponents of the Herbartian pedagogy in this country. Consequently, it was to be expected that the course of study he evolved would be a practical application of the doctrine of concentration, which, whether rightly or wrongly, has come to be regarded as one of the fundamental doctrines, if not the fundamental doctrine, of Herbartianism.

Dr. McMurry, however, is modest in his own statement of what he has accomplished. "The doctrine of *concentration*," he says in his preface, "has influenced the choice and arrangement of materials not a little." After the remark that "Concentration is a very large and comprehensive problem and can be worked out only gradually," he proceeds: "Not much effort is made in this course to correlate arithmetic with the other studies, and in writing, drawing, and music not very much is yet accomplished, but in history and literature, reading, geography, natural science, and language, there seems to be already a natural and legitimate field for correlating studies." It is interesting to note in these sentences the confusion of the terms "correlation" and "concentration." Or are these terms synonymous?

I could wish that Dr. McMurry had extended his preface sufficiently far to tell us on what principle his "concentration" or "correlation" is based. I confess that I find some difficulty in determining it. As far as the mechanical arrangement of topics is concerned, this course of study presents, in appearance at least, as rigid an isolation of studies as even Dr. Harris could desire. Reading, arithmetic, writing, spelling, drawing, etc., have each its separate place and each its separate

allotment of time, and, when I examine each grade, I find that the center, or apparent center, changes more than once.

In the first year, most of the work grows out of the literature, which, it is presumed, is to be read or told to the pupils. Thus the story of "The old woman and her pig" supplies the "two central characters" of the dog and cow, which are to be studied under the head of nature-study. "The four musicians" suggests the study of the donkey (compared with the horse), the cat, the chicken, and related types. Grimm's "The bird with no name" leads to observation of the robin, woodpecker, and the like. The stories and related studies supply material for the first lessons in reading, which, however, are to be accompanied by drills on the sounds of the letters and the use of a primer. Besides the usual drill on numbers, according to a modification of the Grube method, the literature and science are drawn upon for material: the child is to "show as many fingers" as there were trees around the grandmother's house in the tragedy of Red Riding Hood; to count the "long, sharp teeth" of the dog; and to discover how many teeth are lacking in the upper jaw of the cow. The stories, again, are to supply material for language lessons, spelling, and writing; while drawing is confined to molding in clay and cutting from paper the objects studied under nature, and to pictorial illustrations of stories. Indeed, the first grade presents the best example in the book of concentration. Many persons, however, will be inclined to wonder why it is necessary to introduce familiar objects such as the horse and the cow, the duck and the bean, through the medium of the fairy story. Are not the child's impressions, derived from observation at first hand, a sufficient basis for apperceiving whatever of new knowledge it may be proper to present? The Herbartian would probably answer that interest in the object is heightened by the skillful use of the story. But may not interest in the story be lessened by reducing its idealizations to the baser uses of counting, modeling, paper-cutting, and the like? In fairy tales, says Colonel Parker, "The cruel bonds of stern reality are broken, and it [the child] enters a beautiful and invisible world, peopled by creatures of its own fancy." Why destroy the illusion? Is not the whole plan of concentration here outlined purely artificial? We might as well make the story of Santa Claus the basis of study

in physiology, or turn the "Ode on the intimations of immortality" into an exercise in parsing.

In the second year most of the work is founded on *Robinson Crusoe*. "The children measure off in the school yard the distance from the door of Robinson's cave to his fence in front, the distance apart of the ends of his fence, which was in the form of a semicircle, the length and breadth of his cabin. In cutting out his clothes the different pieces are measured. His baskets held different amounts; his jars also. He measures his milk, his wheat, and rice; he gathers lemons, oranges, and cocoanuts by the dozen. The number of goats in his different pastures are made the basis of study." I quote this passage at length to indicate fully Dr. McMurry's method. I am inclined to use regarding it Dr. McMurry's own words of warning to those who would obscure geography with a "vast redundancy" of science: "We have no right in the midst of a geographical discussion to run across to some scientific topic, and in the treatment of it to lose sight of the original subject. If this were true, we should be equally justified in running on from the natural science topic into history and never returning to our original point of departure. But this would lead to total confusion of studies."[1] Have we any right in the midst of a literary subject to "run across" to arithmetic or science, and thus to mar the interest of the story? Science and geography, and number and history, should be used in connection with literature just so far as they "explain and clear up" the meaning. They should not be allowed to "overload" it.

In the third grade the use of "concentration" is difficult to discover. Arithmetic is not directly correlated with the other subjects, except so far as the teacher may be able to draw on them for material in the construction of problems. Geography is introduced, but has no connection with the literature. The latter treats of Greek myth; the former, of home surroundings; while the natural science has no direct connection with either study.

"In the fourth grade," says Dr. McMurry, "perhaps better than in any other can be seen these relations of studies to one another which the theory of concentration requires." History is introduced, and, as the historical studies treat of the pioneers in the Mississippi Valley, as the geography

[1] EDUCATIONAL REVIEW, IX: 455.

includes "twenty important topics" drawn from the same region, and as the natural science includes specimens of its fauna and flora, these three subjects may be regarded as closely related. But why, on any logical theory of concentration, should children, while studying the geography, history, and fauna and flora of the Mississippi Valley, be required to read *Ulysses among the Phæacians*, *Tales from Spenser*, *Stories from the History of Rome*, *Heroes of Asgard*, Homer's *Iliad*, and *Gulliver's Travels*. If the grotesque "The old woman and her pig" is good enough to form the foundation for science teaching in the first grade, surely the history and physiography of the Mississippi Valley might be expected to furnish some literature around which the details of these studies would naturally cluster.

In the fifth grade the history and geography treat of the Atlantic coast; and the natural science pays a compliment to the ocean by presenting for study the oyster and the clam. The literature, with the exception of Higginson's *American Explorers*, and, to some extent, *Hiawatha*, treats of alien subjects, such as Ruskin's *King of the Golden River*, and Arnold's *Sohrab and Rustum*.

In the sixth grade reading and history are closely connected, both treating largely of colonial subjects; but the geography, that of Europe, is isolated; while the natural science has scarcely any connection with any of these subjects. Here we are confronted with this extraordinary statement: "In this grade the exercises in the use of correct English, oral and written, should be brought to completion." It is impossible that the author means what he says.

In the seventh grade reading and history are still kept in touch. The Revolution is the center of both. Geography, on the other hand, wanders off to Asia, Australia, Africa, and South America. Grammar is introduced and is made to treat of such subjects as the "thought process" and its "three elements," the sentence and its "three elements," the classification of words as "substantives, attributives, and relationals," "nouns, pronouns, and infinitives," phrases and clauses. It is a pity that a most admirable treatise in this grade on methods of teaching percentage should be marred by the following attempt to "correlate" natural science and arithmetic: "An apple will be presented to the class; it will be cut into halves, fourths, and eighths. The pupils will be required to tell what

part of the apple, peeling, meat, juice, etc., is presented each time." For objective illustration, the wise teacher will confine himself to material that can be accurately measured. An apple cannot be divided, except by the rarest chance, into exact halves or fourths.

In the eighth grade history is brought down to the "recent history of political parties." Some literature related to the history, such as Webster's *Reply to Hayne*, Emerson's *Fortune of the republic*, and Lincoln's *Gettysburg speech*, is used; but for the most part the reading matter is alien to the history. The geography deals with topics selected from North America; grammar, with the classification and inflection of words; natural science, chiefly with experimental physics; while the arithmetic is supposed to be complete.

I have drawn up this rough outline of Dr. McMurry's course of study to show how very little, after all, one of the avowed advocates of concentration has been able to secure concentration. In the first two years a pretty complete scheme of concentration, artificial though it is in many respects, has been worked out. From the beginning of the third year, there is no common center. Diligently has Dr. McMurry searched for it; but he has not found. It would be an extremely rash, though not unnatural, conclusion, to say that it does not exist. In justice to the author, however, I must repeat that he lays no claim to a discovery.

From other points of view, however, this course of study is open to criticism. In writing, drawing, and music, the author tells us, with regard to correlation, that "not very much is yet accomplished," and yet drawing presents the one systematic attempt at correlation throughout. It is confined to representation of objects studied under natural science and of the child's ideas of the literature read. This is a bold challenge to the prevailing method of teaching drawing. I do not attempt to pass judgment upon it. It must be tested by its fruits. The exercises suggested should certainly be practiced; but is there not an "alphabet of drawing" that must first be mastered in isolation, to render such work effective?

In the seventh grade is presented an elaborate disquisition on the teaching of grammar, which contains many things "hard to be understood." In the first place, Dr. McMurry would present to the child the logical view of the sentence as consisting of subject, predicate, and copula. The consensus

of opinion among teachers, ever since grammar was taught to children, has been that this Aristotelian view of the sentence, necessary as it is for logic, is altogether too subtle and abstruse for the child mind. The teacher of to-day will be confirmed in this view should he attempt to make a thirteen-year-old boy in the seventh grade understand the following: "The attributive verb is different from the adjective verb in having the assertive or relational element. On account of its having this copulative function, the attributive verb can never be a modifier as the adjective can, but will always express two of the principal ideas in the thought process, that is, it is the predicate adjective and the verb." Every logician knows that Dr. McMurry's analysis of what he calls the "attributive verb" is correct, but it is not "milk for babes."

The real "milk for babes," the classification and inflection of words, Dr. McMurry puts last in his scheme of grammar. In doing so I cannot but think he makes a mistake. Much of this work must always be memory work. It can be learned just as readily in the fifth and sixth grades as in the eighth; and, when so introduced, may be made of almost infinite use in connection with composition and the study of literature. Such a use is a true correlation.

Again, Dr. McMurry requires at some points in his course an amount of work far beyond the physical and intellectual powers of the children in the grammar school. For instance, the reading matter required in the eighth grade is quite as extensive as that set for admission to our foremost colleges. Here are the items: *Vision of Sir Launfal*, *Brooks's American Orations*, *Selections from Ruskin*, *The Vicar of Wakefield*, Plutarch's *Lives*, *Merchant of Venice*, *Roger de Coverley Papers*, Emerson's *Fortune of the republic*, Webster's *Reply to Hayne*, Bacon's *Essays*, Scott's *Marmion* and *Lady of the Lake*, Shakspere's *Julius Cæsar*, Johnson's *Rasselas*, and Lincoln's *Speeches*. Truly this is a formidable array of literature. It recalls Professor Brander Matthews's judicious remark: "To compel the young to study that which they are then unable to understand is likely to give them a strong distaste for the fare thus forced upon them."[1] This literature, however, is only a small fraction of the work of the grade, which, as already set forth, includes history, geography, arithmetic, grammar, and this appalling list of scientific subjects: heat, the mechanical

[1] EDUCATIONAL REVIEW, IX: p. 413.

powers, gravitation, hydrostatics, pneumatics, light, sound, magnetism, frictional electricity, and voltaic electricity. To state this list is to show its absurdity.

On the other hand, many subjects now usually included in courses of study are omitted. Physical culture, morals and manners, and civics are left out; and no attempt is made at enrichment by the introduction of algebra, geometry, Latin, or manual training.

The chief merits of the book are, first, the many excellent suggestions it provides as to methods of teaching; second, the admirable lists of topics it presents, particularly in geography and natural science; and, third, the selection of poems and stories for reading, memorizing, and language work. In its general scheme, I cannot regard it as equal to many existing courses of study; in its suggestiveness, it is in many respects worthy of the highest praise.

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BROOKLYN, N. Y.

A Dano-Norwegian reader—Selections from Danish and Norwegian authors, arranged for the use of learners; with English translation of the prose pieces; grammatical outline; and vocabularies.—By J. Y. SARGENT. [Parallel Grammar Series.] New York: Macmillan & Co., 1895. vi + 176 p. $1.00.

Mr. Sargent's little book is modestly put forth in the preface as a "slight introduction," which characterization thus at the outset disarms criticism as to its limited scope. Its purpose, as stated in the same place, is to form an easy road to a reading knowledge of Danish and Norwegian authors, apparently for the common man, to whom results are promised with the exercise of "a little intelligence" and "no great industry." The expressed purpose of the author is to proceed along the lines of least resistance. With this end in view, he accordingly prints first a variety of prose extracts from Dano-Norwegian literature on one page, and over against them, on the other, the corresponding English translation; secondly, a number of poems by Danes and Norsemen, from Paludan-Müller to Ibsen; afterward a grammatical outline in some twenty pages; the elements of pronunciation, and, finally, a vocabulary of the proper names occurring in the verse.

It is extremely problematical whether the first part of the *Reader* will be as efficacious as the author has hoped in the

direction of any substantial knowledge of the inflexions and syntax of the foreign language. Once more according to the preface, "the English translations have been made as literal as possible, and, as far as practicable, the order of words in the original has been kept." Such a system, however, to have fulfilled the proper measure of its usefulness, should have presupposed an absolutely literal translation and the almost exact retention of the order of words. This latter point has been helped out to some extent by footnotes, but there is still implied an intuitive knowledge which the learner, who is here brought for the first time face to face with the new language, can scarcely be imagined to have. A syntactical summary, even a short one, would have added greatly to the efficacy of the book. With a knowledge of inflexions the learner will come off somewhat better, for the grammatical outline, condensed as it is, will put him into possession of fundamental facts. As is the fault generally of such condensations intended for elementary purposes, the grammar, nevertheless, is far too concisely stated and presupposes the application of generalizations where, from the circumstances of the case, it is well-nigh impossible. Such a grammar as this is doubtless infinitely better than none, but the desire to be short and sharp in statement has impaired it. Its phraseology, like its purpose, is purely practical, and some of its statements would probably not be left to stand in a more pretentious work.

The author's *Grammar of the Dano-Norwegian Language* (1892) is, in the main, a piece of work fairly well suited to its purpose. The present book is too unambitious. Dano-Norwegian *Readers*, from the nature of the case, cannot be printed every year, and one to have corresponded in scope with the author's *Grammar*, and based upon it, would have been a much more fortunate use of his opportunity. The selections from prose and poetry are fairly representative. Almost everybody is there but Björnson, in some ways the most notable of all. In his notes, it is worthy of remark to see that the author still keeps up the fiction that Vinland had a probable geographical connection with our own Massachusetts. As a sign of the times the *Reader* is interesting, as indicating an increased attention to the more northern members of the Germanic group of languages.

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The connection between thought and memory: a contribution to pedagogical psychology on the basis of F. W. Dorpfeld's monograph, *Denken und gedachtnis*. By HERMAN T. LUKENS, Ph. D., Docent in Clark University, with an Introduction by President G. STANLEY HALL. Boston: D. C. Heath & Co., 1895. 169 p. $1.00.

The purpose of this monograph is to establish and apply the principle that, while thinking is the end of the intellectual matter, there can be no thinking without something to think with, and this something the memory alone can supply; and further that, while memory is thus the servant of thought, thought, especially if duly harnessed to the task, is far and away the most effective means of committing to memory. That is to say, if it be true that "the law of thought is likewise one of the two laws of memory," it follows that by far the greater part of the work of memory may be accomplished by thought, and further, that memorizing may be made a noble and inspiring activity, instead of a degrading and distasteful task. And so, as Rector Dorpfeld tersely put it—"the teacher who neglects memory is a fool; if he neglects thought he is doubly a fool; and if besides he overlooks the connection between thought and memory, he is a fool thrice over."

The book may therefore be regarded as a plea for rational drill, and as containing hints for making drill rational. And there is that in its doctrine which should serve as a corrective of some of the faults that seem to attend the virtues of the new education; such faults as, for example, saying that it is "not knowledge we seek, but power"—as if there were ever any power except through knowledge; complaining of examinations, which is well enough, and abolishing them, which is not well; acting as if "drill" were of necessity synonymous with *dry*, and exaggerating the force of "the immediate impulse of intrinsic thought" in its bearing upon the power to recall. In this light it appears that the trouble with the old education is not that it gives drill, but that it gives nothing else; and that while the new education aims first of all to give *something*, it is in danger of forgetting that the content is not merely to be presented once for all, but to be driven home.

One prime effect of this book should be, therefore, to help teachers to read a truer meaning into *repetitio mater studiorum*, and to suggest to them the possibility of buoyant, patient, varied, rational, interesting, and—everlasting, drill. The question "How teach children to study?" is here answered, as also

the query "How conduct the unprepared recitation?" The teacher's work is thus seen to be, not only to prepare the soil, present with clearness, organize and apply, but to give time withal for silent, *thoughtful* repetition. "The work of memorizing," Dorpfeld goes so far as to say, "should be done in the school. This applies equally to all the subjects of instruction."

This book, which is now for the first time made available for readers of English, is based upon a later edition of a work which first appeared in Germany some thirty years ago. The second edition was published in 1884, since which time there have been three editions, but practically no changes in the text. The possibility of making the book better was appreciated by the author, and this he would have done, as he himself wrote, had the state of his health permitted. To the American translator and reviser was left the task that it was not permitted to the author to carry through.

The commendatory words which President G. Stanley Hall has written in the Introduction, imply, if they do not state in terms, that Dr. Lukens has presented us "with a condensed digest, instead of a literal translation." This will be accepted by most of us as a valid criticism of that "excessive reverence for the German speculators of half a century ago," now "obsolescent," from the results of which, in its acuter forms, we are still suffering; and it should be taken as an ideal for much similar work. But it cannot fairly be claimed that the original work has been in any strict sense condensed or digested. In so far as the present writer has had the opportunity of judging, this book is, for the most part, a pretty faithful translation of the German text. As for the rest, many passages of purely local application have been omitted or adapted, helpful illustrations and remarks have been inserted, foot-notes and bibliographies have been added, and, in one notable instance, a long passage setting forth the Herbartian view of association—in which the worthy Rector is moved to compare the service of Herbart in the matter in hand with that of Sir Isaac Newton *in re* gravitation, to the distinct disadvantage of the discoverer of the laws of purely material association—is replaced by an admirably clear, succinct, and modern exposition which constitutes Dr. Lukens's chief original contribution to the book. But, on the whole, the impression naturally produced is that the book remains essentially Rector Dorpfeld's, when it might

better, perhaps, have been made Dr. Lukens's; that it is still a psychological monograph with a pedagogical appendix,—as its author admitted it to be,—while the present need of American teachers calls for a transfer of the emphasis to the pedagogical side and a consequent expansion and enrichment of this part.

To American readers it may also seem that the references to "the text-books," which in 1866, and even for twenty years thereafter, were doubtless open to the indictments brought against them, might better have been omitted; and, further, that instead of aiming at "regulatives" and the advocates of memoriter methods generally, the guns should have been trained on the more modern adversaries of the truth. New times, new errors. The old errors persist, it is true, but their hidebound advocates do not read Messrs. Heath & Co.'s publications. The suggestion seems pertinent, also, that a book of this kind might profitably be made still more applicable to the needs of secondary teachers, increasing numbers of whom are now seeking and will continue to seek professional training. The time has happily gone by when a pedagogical work of this grade can fulfill its mission unless its author address himself not only to elementary teachers, but to college graduates as university students or teachers in secondary schools. There are parts of mathematics more interesting and instructive to teachers in elementary schools and secondary schools alike, than the learning of the multiplication table, which is the sole example of its kind given. An illustration drawn from the arithmetic of the sixth grade, or from the algebra of the eighth grade, or both, would meet the needs of a larger constituency. Application of the principles advocated to the methods of teaching grammar, both in the vernacular, and in foreign languages, might also be inserted. Nevertheless, as it stands the book does appeal to specialists and to general teachers. If, however, we add to the foregoing the suggestion of President Hall that "more stress should be laid upon immanent thinking,—as being incalculably more important than intentional thinking, though the latter is the kind chiefly dealt with in books,"—we may say that, on the whole, the plan of the American work might be modified to advantage. There is room for further enrichment with the results of modern child-study. The adaptation to present American conditions might be nicer, and the whole discussion

brought more completely down to date. In no spirit of depreciation is this said, but in the hope that a good book may be made excellent. In the same spirit the following minor points of criticism are briefly suggested:

The fact that the original monograph was written before modern psychology was discovered may be answerable for the treatment of the intellect as something quite apart from the feelings and the will. Even Dr. Lukens writes that "thought is the sole purpose . . . of . . . memory." A change in this regard would seem desirable, if the book is to appeal to readers of modern psychology. On the other hand, the disadvantage arising from the original author's fidelity to the Herbartian psychology is for the most part only apparent. If the chapter on thought could be modernized, as the paragraphs on association have been, there would remain not enough of the Herbartian psychology to cause more than a passing twinge. There is, to be sure, a certain advantage in the view taken of reasoning, that it is only presentation, dependent on continued clearness of ideas (p. 16); but this view, and also the statement that "to judge is nothing more than to call up clearly in consciousness a distinct mental representation or idea of the object to be judged, together with those characteristics wherein it is like or unlike another object" (p. 57), must be regarded as loose. Similarly, the account of judgment as "an act of mental representation, wherein two concepts (in the sense of subject and predicate) stand together complete in consciousness" (p. 13) might easily prove misleading; the essential part of the act being, as it were, smuggled in under cover of parenthesis. In short, if the present writer may hazard a guess as to what is lacking in this discussion, the one thing needful here is a wholesome touch of that transcendental quality of which Dr. Harris might on application furnish an adequate supply. Instead of a "mode of presentation" *to* something (that just has things presented to it, a free fight thereupon ensuing between said things), we should then read of a "mode of conceiving" *by* something, which something can, as Hoffding points out, exercise self-control to keep down elements not to the point and can strive to call up and collect everthing pertinent.

While this is said to be a "Herbartian book," it contains little upon the current Herbartian pedagogy, and is sparing in its use of the Herbartian terms. Its author was not, as one

may say, numbered among the neo-Herbartians, but sprang from the parent stock somewhat earlier than these. This is a distinct advantage, for it gives a new point of view, yet one not inconsistent with the more familiar doctrines.

As a whole, the book is clearly written. But the analysis is painstaking even to the point of being, at times, cumbersome. Teutonic patience and thoroughness in setting forth a matter in due order abound. Nothing is hid that could, even at pains to all concerned, be revealed. There are pages of analysis that might be replaced to advantage by a single anecdote or by a terse statement. The style of the author-translator is in general of a kind that economizes the attention of the reader. At times, however, it lacks variety and finish. The insertion in the text of topical headings in bold-faced type would add greatly to the ease of reading.

As it stands, *Thought and memory* is a timely and, for the most part, pertinent contribution to the cause of sound teaching. It is well worthy of all the further enrichment, adaptation, and polish that can be given to it.

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NOTES ON NEW BOOKS

Mention of books in this place does not preclude extended critical notice hereafter

Mr. Bardeen has issued a handsome edition of Grasby's *Teaching in three continents*, an important book that was noticed fully in this REVIEW at the time of its first appearance (Syracuse, N. Y.: C. W. Bardeen, 1895. 344 p. $1.50).—— It is a matter for surprise, in view of the demands of modern scientific method, that the ordinary manuals of logic are so largely given over to the deductive system. Ballantine's *Inductive logic* is a partially successful attempt to rectify this defect. It is based too largely on Mill, and does not take sufficient account of the work of Sigwart, Bradley, Jevons, and Venn to be a thoroughly satisfactory book (Boston: Ginn & Co., 1896. 174 p. 90 cents).——*German songs of to-day*, edited by Professor Tille of the University of Glasgow, is a very excellent piece of work. It is an effort "to bring together characteristic illustrations of the various intellectual movements that have made themselves felt in German lyric

poetry during the last twenty-five years" (New York: Macmillan & Co., 1896. 184 p. $1.00).——Mr. Jules Marcou, the last survivor of the small band of European naturalists who came to America with Agassiz, has prepared a *Life, letters, and works of Agassiz*, a complement to the admirable *Life* by Mrs. Agassiz that was published years ago (New York: Macmillan & Co., 1896. 2 vols. 302, 318 pp. $4.00).—— That modern physical science is based upon the doctrine of the conservation of energy has been practically ignored hitherto in the making of elementary text-books on chemistry. Dr. Paul C. Freer of the University of Michigan has broken away from the old lines, and in the *Elements of chemistry* (Boston: Allyn & Bacon. 284 p. $1.00) we find a treatment of the fundamental principles which is as refreshing as it is clear and concise. There may not be enough chemical knowledge to please some who do not propose to continue the work beyond the present volume, but, as an introduction to a higher course, it is of rare value.——A work on *Practical inorganic chemistry*, by G. S. Turpin (New York; Macmillan & Co. 158 p. 60 cents), is well adapted for use in connection with any good elementary lecture course in general chemistry. The range of the experiments is scarcely wide enough to serve when no other laboratory work is to be given. Freer confines his experiments largely to the quantitative type, and we find the same disposition in this volume, but in a much less degree. This departure is commendable. ——The *Chemists' compendium* (New York: Macmillan & Co. 240 p. $1.00) is a reference manual designed for pharmacists, not chemists, in the daily exercise of their craft. It contains a wide range of topics, many of which are not closely related.——Thomas H. MacBride of the State University of Iowa, in *Lessons in elementary botany* (Boston: Allyn & Bacon. 233 p. 60 cents), adopts the method of study which involves the consideration of the "more striking phases" of the "more familiar forms," first "leaving the more recondite problems for later inquiry." The author wisely insists upon individual work in observing and drawing.

IX

EDITORIAL

The associates of Dr. Poland in the conduct of the EDUCATIONAL REVIEW may be permitted to congratulate the city of New York upon having secured his acceptance of the position of assistant superintendent of schools in succession to the late Dr. Calkins. By this transfer of Dr. Poland's activities the State of New Jersey loses a State superintendent of the highest order of efficiency, and one whose continuance in office through any and all political changes was assured. Were it not for the impending reforms in the administration of the New York schools, and for the great opportunities for usefulness and distinction that will follow the creation of the Greater New York, Dr. Poland would have suffered a distinct loss of dignity and influence in entering upon this new field of work. But with Tammany Hall and the school "ring" on the point of being driven out of the schools by an aroused and indignant people, a new era is dawning. The public school system of that great metropolis, with its three and a half million of inhabitants, will be the greatest single influence in America for the education and uplifting of the children of all the people. For years the New York schools have been maintained more or less as charity schools for one class of the population only, and not as public or common schools for the whole population. It is now proposed to insist upon making them so good that no parent can afford *not* to send his children to them. That Dr. Poland's abilities and energies will be devoted to bringing about this new order of things is the conviction of all who know him.

So far as Superintendent Jones's planning and presiding could make it so, the Jacksonville meeting of the Department of Superintendence was a pronounced success. But the general feeling with which many superintendents came away from the meeting was one of disappointment. In the first place, the meeting should not have been held at Jacksonville at all,

which is as unattractive as only a Southern town can be, but at St. Augustine, which abounds in historical interest and numbers among its hotels some of the most luxurious and inviting in the country. In the second place, the programme was greatly overloaded, the resolutions regarding this matter that were adopted at the Richmond meeting, on motion of Mr. Bright of Illinois, being entirely overlooked. In the third place, and most vital of all, the really live movements with which progressive and scholarly superintendents are concerning themselves found little or no expression in the papers and discussions. There was a great deal of traveling over old ground, and in one detail at least, a distinct attempt to reproduce the Cleveland debate on the Report of the Committee of Fifteen. Naturally this was a flat failure, for the spontaneity and originality that marked the discussion of a year ago were incapable of reproduction; and besides, the impression has become very general that the continued debate is a mere logomachy, for the participants are continually illustrating by their lives and practices that they occupy common ground and have in view precisely the same ends. Omitting Dr. Harris, who is always listened to with affection and respect, the honors of the meeting were easily borne off by Superintendent Gilbert of St. Paul, President De Garmo of Swarthmore, Superintendent Soldan of St. Louis, Professor Alderman of North Carolina, and Inspector Hughes of Toronto. Dr. Curry's oratory was followed with rapt attention, and Dr. White was very effective in his brief tribute to the late Dr. Calkins.

The new president of the Department is Mr. Gilbert of St. Paul, and the meeting for 1897 will probably be held at Indianapolis.

Our account of the struggle for school reform in the city of New York ended last month with a statement as to the origin and plans of the Citizens' Committee of One Hundred on Public School Reform, of which ex-Mayor Abram S. Hewitt is chairman. At that time, too, the Strauss or Tammany Hall bill, for the perpetuation and extension of the ward-trustee system of school government, was in the hands of the Senate Committee on Cities.

On February 4 the reform movement formally joined issue

with the "ring," and on that day Senator Pavey of New York introduced in the Senate the following short bill, which brought the principle involved in the struggle clearly before the public and the legislature:

AN ACT

IN RELATION TO THE COMMON SCHOOLS AND PUBLIC EDUCATION IN THE CITY OF NEW YORK

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. From and after the thirtieth day of June, eighteen hundred and ninety-six, the term of office of the present trustees of common schools in and for the several wards of the city of New York shall end, and their official functions cease, and said office be abolished, and all power, authority, duties and jurisdiction then vested in said trustees shall devolve upon the commissioners of common schools then constituting the board of education in said city and their successors in office, and said board shall perform such duties or cause them to be performed by the city superintendent of schools and his assistants and by the superintendent of school buildings and his assistants, in accordance with rules and regulations to be prescribed by said board; but nothing in this act shall affect the tenure or compensation of any principal or teacher now employed in the public school system of the city of New York.

§ 2. The said board of education is hereby authorized to appoint such additional assistants to the city superintendent of schools and to the superintendent of school buildings as may be necessary to enable said board to perform the duties devolving upon it under the provisions of this act.

§ 3. All acts or parts of acts inconsistent with this act are hereby repealed.

§ 4. This act shall take effect immediately.

This Pavey bill, by its brevity and directness, appealed at once to the public and the press. The *Tribune*, *Times*, *World*, *Journal*, *Evening Post*, *Mail and Express*, *Commercial Advertiser*, *Harper's Weekly*, and *Critic* gave it prompt and continuous support. No newspaper opposed it. The City Club, the Citizens' Committee, the Council of Confederated Good Government Clubs, Good Government Club E (which has devoted itself specially to the study of school matters), the Public Education Association, and numerous other representative bodies indorsed the Pavey bill enthusiastically. Strauss and his allies endeavored to break the force of the popular movement for the abolition of the local trustees by circulating

the utterly false story that sixty assistant superintendents at a salary of $4000 a year each would be needed to do the work of the trustees. This preposterous and silly untruth was laughed out of court by the public and the press, after having deceived no one but the president of the board of education.

On February 18 and 25, the Senate Committee having charge of the Strauss and Pavey bills gave public hearings on the whole subject. For the Strauss bill there appeared only members of one faction in the Board of Education and three grammar-school principals. They contented themselves with advancing the usual arguments: (1) that the trustees keep the schools "close to the people," whatever that may mean, and (2) that trained educators cannot be as well trusted to examine, appoint, and supervise principals and teachers as ignorant laymen or busy men of affairs. Being challenged to cite any single educator of reputation or any one student of school administration who indorsed their claims, they fell back upon the broad and somewhat dangerous generalizations that trained educators are "theorists" and "idealists," and that the New York school system "towers like a beacon light up over the whole educational world." We hope that our readers in the West will note this interesting (if true) statement.

On the other side and for the Pavey bill appeared a strong delegation of school officials, including members of the Board of Education, a dozen or more of the ward trustees themselves, and many of the women inspectors of schools. With them were present a number of representative tax-payers and citizens, and also authorized representatives of all the organizations named above as having indorsed the Pavey bill. The speeches on this side were marked by thorough and detailed knowledge of the subject, excellent temper, and a high plane of argument. It was universally admitted that the "theorists," or people who see, and "idealists," or people who have ideas, swept everything before them. Their arguments were unanswered and unanswerable.

On March 3, on motion of Senator Lexow, the Senate Committee on Cities referred the whole matter for consideration to a subcommittee consisting of Senators Stranahan, Lexow, White, and Ahearn. Two days later it was announced that a majority of this subcommittee had agreed upon a sub-

stitute bill, Senator Ahearn, who is a Tammany man, dissenting. This substitute bill, for which Senators Stranahan, Lexow, and White are entitled to the credit, is now before the Senate, having been favorably reported by the Committee on Cities, and its enactment into law is confidently expected. Should this expectation be realized, the old order will change and give place to the new on July 1 next. The New York schools will then be redeemed from the politicians and their parasites and restored to the people whose schools they are.

The substitute, or Stranahan, bill is based upon the Pavey bill, and is by all odds the best measure, dealing with the New York schools, that has yet been presented to the legislature.

The bill provides:

1. That the central and final authority over the schools shall be vested in a board of education, appointed by the mayor. This board consists of twenty-one members, serving for terms of three years. The terms of one-third of the members expire each year. Members of the board of education receive no compensation.

2. The ward trustees are abolished, and the very name ceases to exist.

3. The board of education is to appoint a city superintendent and as many assistants as may be necessary, for terms of six years each. There are now eleven assistant superintendents. The present salaries are $7500 for the superintendent and $4000 for each of the assistant superintendents.

4. The superintendent and his assistants are to constitute the board of school superintendents. This board is to inform and advise the board of education on all matters affecting the course of study and the educational administration generally, and, under rules to be prescribed by the board of education, is to promote and transfer teachers, to classify, promote and transfer pupils, and to have the care and oversight of the schools. Examinations for admission to the eligible list for appointment as principals and teachers are to be held by this board, and from the eligible lists nominations of principals and teachers are to be made by the board of school superintendents to the board of education, with whom the final power of appointment rests.

5. The board of education is to divide the city into at least fifteen school inspection districts, approximately equal in population. For each of these districts the mayor is to appoint five inspectors of schools to hold office for five-year terms. Inspectors receive no compensation. Their duties are of a visitorial character, they report quarterly to the board of education upon the condition of the schools and scholars and the enforcement of the school laws in their respective districts.

6. The board of school superintendents have the right to remove any principal or teacher for incompetence, by a majority vote, in case the removal is approved by a majority of the inspectors in the district. Any principal or teacher so removed may appeal to the board of education. which board may, by majority vote, reinstate the principal or teacher. If the district inspectors alone or the board of school superintendents alone

recommend the removal of a principal or teacher, then a three-fourths vote of the board of education is necessary to effect the removal.

7. The purely executive duties of the board of education that relate to the erection and care of buildings and the supervision of janitors are devolved upon the superintendent of buildings and his assistants.

These seven provisions are the essence of the new bill. Except in so far as they abolish the ward-trustees, which is the Pavey bill, they are taken substantially from the Committee of Seventy's bill of last year. As soon as the details of this measure were made public, there was a terrible uproar among the ward trustees and their followers in the ranks of the principals and teachers. The school "machine" was set at work, and preparations were made for an imposing demonstration against the reform bill. Petitions against it were assiduously circulated in the schools, and scores of teachers were pressed or frightened into signing them. On March 18 a special hearing was arranged for by the Senate Committee on Cities, in order that this manufactured opposition might display itself. It did so, with results that were both ludicrous and pitiful. The various speakers who addressed the committee were all carefully coached by their leaders, and supported by an enthusiastic *claque*. For more than three hours they stormed and raved in the Senate Chamber. Having no vestige of argument, they resorted to abuse, misrepresentation, and downright falsehood. The newspapers concealed their shame so far as was possible, but enough was reported to make it plain that the whole performance was a thoroughly discreditable one. The members of the Senate committee listened courteously to their irrelevancies, and by occasional questions exposed both the ignorance and audacity of the speakers. President Low, Mr. James B. Reynolds, Mrs. Schuyler Van Rensselaer, and Mrs. Willard Parker spoke briefly but forcibly in reply, and the hearing closed; the prospects of the passage of the bill having been immensely improved thereby.

On March 20 Governor Morton, who has made a careful study of the whole subject, sent a special message to the Legislature, outlining the situation and strongly urging the passage of the reform bill. This timely and statesmanlike act has been applauded from one end of the State to the other, and the days of the school "ring," with their narrowness, their bigotry, and their obscurantism, are surely numbered. It is

hoped that by April 15 the new law will be upon the statute-book.

A very significant fact is the abyssmal silence that has been preserved on this subject of New York city school reform by the "fly-by-night" portion of the educational press. The intelligence and patriotism of the greatest city in America have been wrestling for months with the barbaric and uncivilized elements in the community for the control of the public-school system; the daily press teemed with accounts of the struggle and with contributions to it: yet the "fly-by-nights" noticed it not. Not knowing what the issue of the conflict will be, but believing in their souls that the Tammany politicians and the school "ringsters" are too firmly intrenched to be driven out, they doubtless think that their circulation and advertising pages will be more assisted by discretion than by valor. This is one of several reasons why intelligent people regard the "fly-by-nights" with utter contempt.

The valuable reports on primary education in the United States and on secondary and higher education here, prepared after visits to the Chicago Exposition in 1893 by Mons. B. Buisson and Mons. G. Compayré respectively, have been published in three handsome volumes by the French government. They will shortly be reviewed at length in the EDUCATIONAL REVIEW.

Messrs. Appleton have just announced a very important undertaking in the form of a comprehensive series of books to connect the home with the school. The series will be planned to join the school to the library, public or private, in such a way that instructive and stimulating courses of reading may be carried on under the direction of the teacher. The scope of the series includes books in literature, history and geography, natural science, and ethics, the whole to be edited by Dr. W. T. Harris.

Beginning in August next Professor Earl Barnes of Stanford University will issue ten numbers of a journal to be called

Studies in Education. The object of the journal will be to bring before students of education some of the results of the work that has gone on during the past five years under the direction of Professor Barnes.

There were 114,439 fewer children being educated in French primary schools than there were five years ago, according to the last report of the Minister of Public Instruction, while in the five years the number of pupils in the schools of the Christian Brothers nearly doubled. The Brothers are now teaching 1,365,886 children, with no aid from the Government.

Dr. Welch's admirable and instructive address on the "Evolution of modern scientific laboratories," delivered at the opening of the William Pepper laboratory of clinical medicine, in Philadelphia, on December 4 last, has just been reprinted, in pamphlet form, from the *Johns Hopkins Hospital Bulletin.*

The annual report of State Superintendent Schaeffer of Pennsylvania is as able as it is concise. Pennsylvania is now expending annually five and a half million dollars for the public schools of the State, and the local communities are raising twice as much more. The appropriation made to the State College in 1895 was two hundred and twelve thousand dollars, and that to the University of Pennsylvania, in aid of post-graduate work, was two hundred thousand dollars. An important step, long looked forward to, was the legislative creation of a College and University Council, and the imposition of a property qualification as a condition for chartering new institutions with degree-conferring powers. This will put a step to the indefinite multiplication of "colleges" that are in reality poorly equipped academies.

The biennial report of State Superintendent Sabin of Iowa is an exhaustive document of unusual interest. Iowa is steadily pushing forward and means to have the township system and more normal schools in the near future.

On March 18 the New York Board of Education unanimously elected Principal Thomas S. O'Brien to fill one of the vacancies among the assistant superintendents. This is a capital choice. Mr. O'Brien is a brilliant scholar and a thoroughly equipped school man, as well as a gentleman of great personal charm. He will add great strength to what will soon be a most important administrative board.

Mr. Nicholas Murray Butler, who was unanimously chosen by the board of directors of the National Educational Association as a trustee to succeed the late Dr. Calkins, has declined to serve, and the vacancy thus created will be filled when the directors meet at Buffalo. The trustees have chosen Dr. H. S. Tarbell of Providence as chairman.

The re-election of Superintendent Reinhart of Paterson, N. J., is a deserved compliment to an able and faithful school officer.

It has been brought to the attention of the editor of the EDUCATIONAL REVIEW that some reviews appearing in these pages, not wholly favorable to the books noticed, have been reprinted and circulated anonymously among the teachers of the country, presumably by publishers of rival books; and that persons feeling themselves aggrieved have supposed that in some way the REVIEW was responsible for such action. The authoritative and unbiased reviews of books that appear in this REVIEW are one of its chief titles to the confidence and support of publishing houses and of the public. In every case the sincerity and independence of these reviews are attested by the signature of the writer. The editor does not attempt to influence in any way their expressions of opinion, or the quotation of these expressions, outside of these pages. It may be proper to add, however, that the publishers of the REVIEW have been offered profitable prices for reprinting unfavorable book notices, presumably to be distributed as circulars, and that in every case such offers have been declined.

The editor of the REVIEW is in possession of abundant evidence that both publishers and the public highly appreciate having an opportunity to see new educational publications fairly and frankly criticised and discussed.